

CITY OF HOUSTON

DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

ENGINEERING AND CONSTRUCTION DIVISION

GARDEN OAKS AND SHEPHERD PARK (CENTRAL)
DRAINAGE AND PAVING

WBS NO. M-000285-0001-A

TDLR# EABPRJ
B5000081

AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.W. OR EASEMENTS CALL THE LONE STAR NOTIFICATION: 713-223-4567.



PGAL

TYPE REG. NO. F-2472
3131 BRIDGEMAN, SUITE 200
HOUSTON, TEXAS 77062
PHONE (713) 462-1442
FAX (713) 468-0333

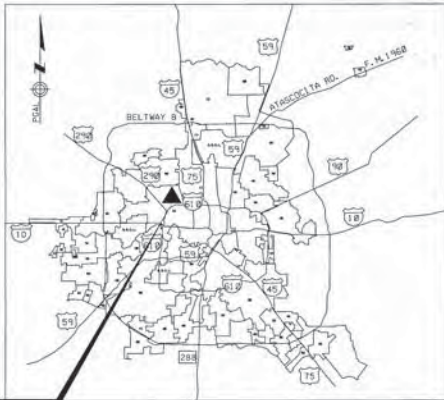


SURVEYED BY: LANDTECH
FB NO. P-5576

<p><i>Katharina</i> 11/18/15 WATER</p> <p><i>John McDavid</i> WASTE WATER</p> <p><i>John</i> 10-18-2015 STORM WATER</p> <p><i>John</i> 11-2-15 STREET & TRAFFIC</p> <p><i>Amor</i> 10/09/16 CONSTRUCTION</p> <p><i>Nancy Patten</i> 11-4-15 NEIGHBORHOOD PROGRAMS</p>	<p><i>John Williams</i> 2/16 TRAFFIC & TRANSPORTATION</p> <p><i>Alanna</i> 10/23/15 SIGNALS</p> <p><i>John</i> 10-14-2015 WARRANTING ENGINEER</p> <p><i>John</i> 1-6-16 PARK-FORESTRY DEPT</p> <p>NOT APPLICABLE SPONSOR DIV / DEPT</p>
---	--

<p><i>John</i> 2/21/16 CITY ENGINEER DATE</p> <p><i>Paul</i> 3/16 DIRECTOR OF PUBLIC DATE WORKS & ENGINEERING</p>	<p style="text-align: center;">55630</p>
---	---

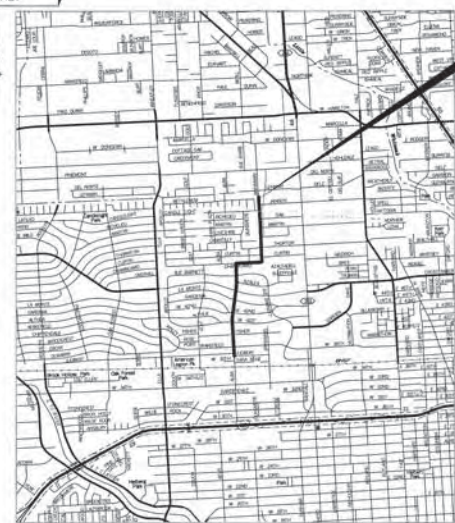
SHEET NO. 1 OF 385 SHEETS



GARDEN OAKS AND SHEPHERD PARK (CENTRAL)

LOCATION MAP (NOT TO SCALE)

GARDEN OAKS AND SHEPHERD PARK (CENTRAL)
BEGIN PROJECT STA 11+45.00
ALBA
END PROJECT STA 35+25.00
BRINKMAN



VICINITY MAP (NOT TO SCALE)
KEY MAP NO. 452-G, L, Q
GIMS MAP NO. 5260B, 5260D



MAYOR
SYLVESTER TURNER

CONTROLLER
CHRIS BROWN

DISTRICT COUNCIL MEMBERS

- | | | |
|------------------------------|------------------------------|-------------------------------|
| BRENDA STARDIG
DISTRICT A | JERRY DAVIS
DISTRICT B | ELLEN COHEN
DISTRICT C |
| DWIGHT BOYKINS
DISTRICT D | DAVE MARTIN
DISTRICT E | STEVE LE
DISTRICT F |
| GREG TRAVIS
DISTRICT G | KARLA CISNEROS
DISTRICT H | ROBERT GALLEGOS
DISTRICT I |
| MIKE LASTER
DISTRICT J | LARRY GREEN
DISTRICT K | |

COUNCIL MEMBERS AT-LARGE

- | | |
|------------------------------|------------------------------|
| MIKE KNOX
POSITION 1 | DAVID ROBINSON
POSITION 2 |
| MICHAEL KUBOSH
POSITION 3 | AMANDA EDWARDS
POSITION 4 |
| JACK CHRISTIE
POSITION 5 | |

DATE PLOTTED: 11/18/15 10:44:00 AM COVER: 001

GARDEN OAKS SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING		
SHEET NUMBER	SHEET TITLE	
GENERAL		
1		COVER SHEET
2		SHEET INDEX
3		GENERAL CONSTRUCTION AND PRIVATE UTILITY NOTES
4	-	LEGEND AND ABBREVIATIONS
5	-	9 GEOMETRIC DATA SUMMARY
10	-	13 OVERALL PROJECT LAYOUT
14	-	17 DRAINAGE AND PAVEMENT LAYOUT
18	-	21 WATER AND SANITARY LAYOUT
22	-	33 GARDEN OAKS EXISTING TYPICAL SECTIONS
34	-	37A GARDEN OAKS PROPOSED TYPICAL SECTIONS
SURVEY CONTROL		
38	-	42 SURVEY CONTROL MAP
43	-	49 SURVEY SWING TIES
DRAINAGE		
50		OFFSITE DRAINAGE AREA MAP
51	-	54 OVERALL DRAINAGE AREA MAP PROPOSED CONDITIONS
55	-	63 PROPOSED DRAINAGE AREA MAP
64	-	72 STORM SEWER COMPUTATIONS
PLAN AND PROFILE		
73		KEY NOTES
74	-	83 ALBA RD PLAN AND PROFILE
84	-	86 CHAMBOARD LN PLAN & PROFILE
87	-	93 BRINKMAN ST PLAN & PROFILE
94		JUDITHWAY ST PLAN & PROFILE
95		WAKEFIELD DR PLAN & PROFILE
96	-	98 FISHER ST PLAN & PROFILE
99	-	103 W 41ST ST PLAN & PROFILE
104	-	106 W 42ND ST PLAN & PROFILE
107	-	110 LAMONTE LN PLAN & PROFILE
111		W 43RD PLAN & PROFILE
112	-	113 AZALEA ST PLAN & PROFILE
114	-	116 SUE BARNETT DR PLAN & PROFILE
117		DUNSMERE RD PLAN & PROFILE
118		CURTIN ST PLAN & PROFILE
119		THORNTON RD PLAN & PROFILE
120		WOODCREST DR PLAN & PROFILE
121		MARTIN ST PLAN & PROFILE
122		OAK ST PLAN & PROFILE
123		CANDLELIGHT LN PLAN & PROFILE
124		JANISCH RD PLAN & PROFILE
125	-	129 UTILITY PROFILES
130	-	131 DRIVEWAY LAYOUT
132	-	140 DRIVEWAY TABLE
141		CIP JUNCTION BOX AND BOX CULVERT CONFLICT MANHOLE OVERALL LAYOUT
142		JUNCTION BOX LAYOUT (JB-01)
143		JUNCTION BOX LAYOUT (JB-02)
144		JUNCTION BOX LAYOUT (JB-03)
145	-	146 JUNCTION BOX LAYOUT (JB-04)
147		JUNCTION BOX LAYOUT (JB-05)
148		JUNCTION BOX TYPE 3 DETAILS
149		JUNCTION BOX TYPE 2 DETAILS
150		JUNCTION BOX MISCELLANEOUS DETAILS
151		BOX CULVERT CONFLICT MANHOLE TYPE "A"
152		BOX CULVERT CONFLICT MANHOLE TYPE "B"
153		BOX CULVERTS PRECAST MISCELLANEOUS DETAILS - SCP-MD (TXDOT)
154		SINGLE BOX CULVERTS PRECAST 5' SPAN - SCP-5 (TXDOT)
155		SINGLE BOX CULVERTS PRECAST 6' SPAN - SCP-6 (TXDOT)
156		SINGLE BOX CULVERTS PRECAST 8' SPAN - SCP-8 (TXDOT)
157		SINGLE BOX CULVERTS PRECAST 10' SPAN - SCP-10 (TXDOT)
158		SINGLE BOX CULVERTS PRECAST 12' SPAN - SCP-12 (TXDOT)
159		PRECAST BOX CULVERT 14'-0" SPAN
159A		CAST-IN-PLACE BOX CULVERT 14'-0" SPAN
STORM WATER POLLUTION PREVENTION PLANS		
160		STORM WATER POLLUTION PREVENTION PLAN NOTES
161	-	171 GARDEN OAKS STORM WATER POLLUTION PREVENTION PLAN PROPOSED

172		STORM WATER POLLUTION PREVENTION PLAN DETAILS
DEMOLITION		
173	-	183 GARDEN OAKS DEMOLITION PLAN
TRAFFIC CONTROL		
184		NOTES, CHANNELIZING DEVICES AND BARRICADES
185	-	186 CONSTRUCTION NARRATIVE
187	-	194 PROJECT PHASING LAYOUT
195	-	197 TRAFFIC CONTROL PLAN TYPICAL SECTIONS
198	-	210 TRAFFIC CONTROL PLAN PHASE 1
211	-	217 TRAFFIC CONTROL PLAN PHASE 2
218	-	227 TRAFFIC CONTROL PLAN PHASE 3
228	-	234 TRAFFIC CONTROL PLAN PHASE 4
235	-	236 DETOUR PLAN
237		TYPICAL TEMPORARY PAVEMENT CONSTRUCTION (TYP-1)
238		TYPICAL ONE LANE ROADWAY WITH WORKZONE (TYP-2)
239		TYPICAL INTERSECTION WITH WORKZONE (TYP-3)
240		TYPICAL ONE LANE ROADWAY WITH WORKZONE (TYP-4)
241		TYPICAL ONE LANE ROADWAY WITH WORKZONE (TYP-5)
242		TYPICAL ONE LANE ROADWAY WITH WORKZONE (TYP-6)
242A		TYPICAL ONE LANE ROADWAY WITH WORKZONE (TYP-7)
242B		TYPICAL ONE LANE ROADWAY WITH WORKZONE (TYP-7A)
243		TYPICAL UTILITY WORK AND ONE LANE CLOSURE
244		TYPICAL 4-WAY INTERSECTION WITH FLAGGING OPERATION
245		TYPICAL TEE INTERSECTION WITH FLAGGING OPERATION
246		TYPICAL ONE LANE CLOSURE WITH DETOUR ROUTING
247		TYPICAL DETOUR OPERATION AT 4-WAY INTERSECTIONS
248		TYPICAL DETOUR OPERATION AT TEE INTERSECTIONS
249		TRAFFIC CONTROL FOR TRAFFIC SIGNAL CONSTRUCTION
250		TYPICAL CROSSWALK AND SIDEWALK CLOSURES
251		BARRICADE STANDARD SIDEWALK CLOSURES
252		TXDOT LOW PROFILE CONCRETE BARRIER PRECAST BARRIER (TYPE 1) LPCB-13
253		TXDOT LOW PROFILE CONCRETE BARRIER PRECAST BARRIER (TYPE 2) LPCB-13
TRAFFIC SIGNAL		
254		TRAFFIC SIGNAL GENERAL NOTES
255		EXISTING TRAFFIC SIGNAL LAYOUT ALBA DRIVE AT W 43RD STREET
256		PROPOSED TRAFFIC SIGNAL LAYOUT ALBA DRIVE AT W 43RD STREET
257		PROPOSED CABLE SCHEMATIC ALBA DRIVE AT W 43RD STREET
258		PROPOSED POLES AND LOOP DETECTORS SCHEDULE ALBA DRIVE AT W 43RD STREET
259		TEMPORARY TRAFFIC SIGNAL LAYOUT ALBA DRIVE AT W 43RD STREET PHASE 1 STEPS 9, 11A, 11B AND 12
260		TEMPORARY TRAFFIC SIGNAL LAYOUT ALBA DRIVE AT W 43RD STREET PHASE 3 STEPS 7, 8A, 8B AND 9
SIGNING AND PAVEMENT MARKING PLANS		
261	-	268 GARDEN OAKS SIGNING AND PAVEMENT MARKING PLANS
268A	-	268C SUMMARY OF SMALL SIGNS
STREET LIGHTING		
269	-	276 GARDEN OAKS STREET LIGHTING PLANS
TREE PRESERVATION PLANS		
277		GARDEN OAKS SHEET ORIENTATION
278	-	296 GARDEN OAKS TREE PRESERVATION PLANS
297	-	302 TREE INVENTORY
303		PLANTING DETAIL/TREE INVENTORY
304	-	306 TREE PRESERVATION DETAILS
CROSS SECTIONS		
307	-	330 CROSS SECTIONS
STANDARD DETAILS		
331	-	333 GENERAL DETAILS - COH STANDARDS
334	-	348 PAVING DETAILS - COH STANDARDS
349		NOT USED
350	-	351 STREET CUT DETAILS- COH STANDARDS
352	-	352H TRAFFIC DETAIL- COH STANDARD
353	-	353B STRIPING DETAILS - COH STANDARD
354	-	369 STORM SEWER DETAILS - COH STANDARD
370	-	371 STORM SEWER DETAILS - TXDOT STANDARD
372	-	377 WATER LINE DETAILS - COH STANDARD
378		WATER LINE PROTECTION REQUIREMENTS - COH STANDARD
379	-	385 SANITARY SEWER DETAILS - COH STANDARD

SDPS
Houston Storm Drainage
Program Support

PGAL
JULY 2002
3131 BRANFORD, SUITE 200
HOUSTON, TEXAS 77042
Phone (713) 652-1444
Fax (713) 968-9533

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND
SHEPHERD PARK (CENTRAL)
DRAINAGE AND PAVING

INDEX OF SHEETS

WSS NUMBER
M-000285-0001-4

DRAWING SCALE
NTS

CITY OF HOUSTON PW
JEFFREY T. HALL, P.E.

SHEET NO. 2 OF 385

GENERAL CONSTRUCTION NOTES

- CONSTRUCT WASTEWATER COLLECTION SYSTEMS, WATER LINES, STORM DRAINAGE AND STREET PAVING IN ACCORDANCE WITH THE LATEST EDITION OF THE PUBLICATIONS STANDARD CONSTRUCTION SPECIFICATIONS FOR WASTEWATER COLLECTION SYSTEMS, WATER LINES, STORM DRAINAGE AND STREET PAVING, AND STANDARD CONSTRUCTION DETAILS FOR WASTEWATER COLLECTION SYSTEMS, WATER LINES, STORM DRAINAGE, AND STREET PAVING PUBLISHED BY THE CITY OF HOUSTON, DEPARTMENT OF PUBLIC WORKS AND ENGINEERING.
- THE GEOTECHNICAL INVESTIGATION FOR THIS PROJECT WAS CONDUCTED IN ACCORDANCE WITH CHAPTER 11 OF THE LATEST EDITION OF THE PUBLICATION INFRASTRUCTURE DESIGN MANUAL, PUBLISHED BY THE CITY OF HOUSTON, DEPARTMENT OF THE PUBLIC WORKS AND ENGINEERING. SOILS REPORT WAS PREPARED BY ASSOCIATED TESTING LABORATORIES REPORT NO. G13-211, DATED 02-18-15.
- UTILITIES PRESENTED ON THESE DRAWINGS ARE SHOWN BASED ON THE BEST AVAILABLE INFORMATION. CONTRACTOR SHALL VERIFY THE EXACT LOCATIONS IN THE FIELD PRIOR TO COMMENCING CONSTRUCTION. CONTRACTOR SHALL NOTIFY TEXAS ONE CALL AT 713-223-4567/811 OR 800-344-8377 AND LONE STAR NOTIFICATION CENTER AT 800-669-8344 AT LEAST 48 HOURS BEFORE PROCEEDING WITH ANY EXCAVATION. UTILITIES MARKED WITHIN THE PUBLIC RIGHT OF WAY OR IN EASEMENTS SHALL COMPLY WITH TAC TITLE 16, PART 1, CHAPTER 18, RULE SECTION 18.6 AND THE AMERICAN PUBLIC WORKS ADMINISTRATION (APWA) UNIFORM COLOR CODE.
- CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGES TO EXISTING WATER, WASTEWATER, STORM WATER LINES AND TRAFFIC CONTROL DEVICES. DAMAGES SHALL BE REPAIRED IN ACCORDANCE WITH THE CITY OF HOUSTON, DEPARTMENT OF PUBLIC WORKS AND ENGINEERING'S STANDARD CONSTRUCTION SPECIFICATIONS FOR WASTEWATER COLLECTION SYSTEM, WATER LINES, STORM DRAINAGE, AND STREET PAVING AND STANDARD CONSTRUCTION DETAILS FOR WASTEWATER COLLECTION SYSTEMS, WATER LINES, STORM DRAINAGE, AND STREET PAVING, REFERENCED ABOVE, AT NO ADDITIONAL COST.
- CONTRACTOR SHALL NOTIFY THE OFFICE OF THE CITY ENGINEER, DEPARTMENT OF PUBLIC WORKS AND ENGINEERING @ 832-394-9098 OR VIA FAX AT 832-395-4424 FOR INSPECTION AT LEAST 48 HOURS PRIOR TO COMMENCING CONSTRUCTION.
- ADEQUATE DRAINAGE SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION AND ANY DRAINAGE DITCH OR STRUCTURE DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO EXISTING CONDITIONS OR BETTER.
- CONTRACTOR SHALL COMPLY WITH LATEST EDITION OF OSHA REGULATIONS AND THE STATE OF TEXAS LAWS CONCERNING EXCAVATION
- CONTRACTOR SHALL SAW CUT TO FULL DEPTH AT THE LIMIT OF DRIVEWAY RECONSTRUCTION. (LIMIT OF DRIVEWAY RECONSTRUCTION IS SHOWN ON PLANS).
- STONE STREET NAME PILLAR THROUGHOUT THE PROJECT SITE SHALL BE PROTECTED DURING CONSTRUCTION.
- CONTRACTOR SHALL NOT DISTURB OR DAMAGE EXISTING LANDSCAPE DURING CONSTRUCTION. CONTRACTOR TO RESTORE LANDSCAPE IF EXISTING LANDSCAPE IS DISTURBED OR DAMAGED DURING CONSTRUCTION AT NO ADDITIONAL COST.
- REFER TO SANITARY SEWER DETAILS SHEET 8 OF 8 (DETAIL 1, SHT 385) FOR SANITARY SEWER SERVICE LINE CONFLICTS WITH PROPOSED RCB STORM SEWER, THAT ARE NOT LOCATED OR IDENTIFIED ON PLAN AND PROFILE DRAWINGS.

IDM CHAPTER	IDM SUBCHAPTER	VARIANCE DESCRIPTION	STREET	STA.
7	WATER LINE CROSSING	MINIMUM VERTICAL CLEARANCE BETWEEN WATER LINE AND OTHER UTILITY. INSTALL CONFLICT MANHOLE/BOX TO ALLOW WATERLINE TO GO THROUGH STORM SEWER	1) INTERSECTION OF ALBA RD/WAKEFIELD DR, 2) ALBA RD/FISHER DR 3) ALBA RD/200 FT SOUTH OF W 41ST ST; 4) ALBA RD/W 41ST ST; 5) ALBA RD/W 42ND ST; 6) ALBA RD/LAMONTE LN; 7) ALBA RD/AZALEA ST; 8) ALBA RD/SUE BARNETT DR; 9) BRINKMAN ST/CANDLELIGHT LN	

FLOOD PLAN MANAGEMENT INFORMATION

ENTIRE PROJECT SITE IS LOCATED OUTSIDE OF THE 500-YEAR FLOOD PLAN PER THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FLOOD INSURANCE RATE MAP (FIRM) PANEL 660 OF 1150. MAP# 48201C0660M MAP REVISED JUNE 9, 2014

PRIVATE UTILITY NOTES

CENTERPOINT ENERGY NOTES

CAUTION: UNDERGROUND GAS FACILITIES

LOCATIONS OF CENTERPOINT ENERGY MAIN LINES (TO INCLUDE CENTERPOINT ENERGY, INTRASTATE PIPELINE LLC, WHERE APPLICABLE) ARE SHOWN IN AN APPROXIMATE LOCATION ONLY. SERVICE LINES ARE USUALLY NOT SHOWN. OUR SIGNATURE ON THESE PLANS ONLY INDICATES THAT OUR FACILITIES ARE SHOWN IN APPROXIMATE LOCATION. IT DOES NOT IMPLY THAT A CONFLICT ANALYSIS HAS BEEN MADE. THE CONTRACTOR SHALL CONTACT THE UTILITY COORDINATING COMMITTEE AT (713) 223-4567 OR 1-800-669-8344 A MINIMUM OF 48 HOURS PRIOR TO CONSTRUCTION TO HAVE MAIN AND SERVICE LINES FIELD LOCATED.

- WHEN CENTER POINT ENERGY PIPE LINE MARKINGS ARE NOT VISIBLE, CALL (713) 967-8037 (7:00 AM TO 4:30 PM). FOR STATUS OF LINE LOCATION REQUEST BEFORE EXCAVATION BEGINS.
- WHEN EXCAVATING WITHIN EIGHTEEN INCHES (18") OF THE INDICATED LOCATION OF CENTER POINT ENERGY FACILITIES, ALL EXCAVATION MUST BE ACCOMPLISHED USING NON-MECHANIZED EXCAVATION PROCEDURES.
- WHEN CENTER POINT ENERGY FACILITIES ARE EXPOSED, SUFFICIENT SUPPORT MUST BE PROVIDED TO THE FACILITIES TO PREVENT EXCESSIVE STRESS ON THE PIPING.

THE CONTRACTOR IS FULLY RESPONSIBLE FOR ANY DAMAGES CAUSED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE THESE UNDERGROUND FACILITIES.

WARNING: OVERHEAD ELECTRICAL LINES

OVERHEAD LINES MAY EXIST ON THE PROPERTY. THE LOCATION OF OVERHEAD LINES HAS NOT BEEN SHOWN ON THESE DRAWINGS AS THE LINES ARE CLEARLY VISIBLE, BUT YOU SHOULD LOCATE THEM PRIOR TO BEGINNING ANY CONSTRUCTION. TEXAS LAW, SECTION 752, HEALTH AND SAFETY CODE FORBIDS ACTIVITIES THAT OCCUR IN CLOSE PROXIMITY TO HIGH VOLTAGE LINES. SPECIFICALLY:

- ANY ACTIVITY WHERE PERSON OR THINGS MAY COME WITHIN SIX (6) FEET OF LIVE OVERHEAD HIGH VOLTAGE LINES; AND
- OPERATING A CRANE, DERRICK, POWER SHOVEL, DRILLING RIG, PILE DRIVER, HOISTING EQUIPMENT, OR SIMILAR APPARATUS WITHIN TEN (10) FEET OF LIVE OVERHEAD HIGH VOLTAGE LINES.

PARTIES RESPONSIBLE FOR THE WORK, INCLUDING CONTRACTORS, ARE LEGALLY RESPONSIBLE FOR THE SAFETY OF CONSTRUCTION WORKERS UNDER THIS LAW. THIS CARRIES BOTH CRIMINAL AND CIVIL LIABILITY. TO ARRANGE FOR LINES TO BE TURNED OFF OR REMOVED, CALL CENTERPOINT ENERGY AT (713) 207-2222.

AT&T TEXAS/SWBT FACILITIES

- THE LOCATIONS OF AT&T TEXAS/SWBT FACILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION BEFORE COMMENCING WORK. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THIS FAILURE TO EXACTLY LOCATE AND PRESERVE THESE UNDERGROUND UTILITIES.
- THE CONTRACTOR SHALL CALL 1-800-344-8377 A MINIMUM OF 48 HOURS PRIOR TO CONSTRUCTION TO HAVE UNDERGROUND LINES FIELD LOCATED. WHEN EXCAVATING WITHIN EIGHTEEN INCHES (18") OF THE INDICATED LOCATION OF AT&T TEXAS/SWBT FACILITIES, ALL EXCAVATIONS MUST BE ACCOMPLISHED USING NON-MECHANIZED EXCAVATION PROCEDURES. WHEN BORING, THE CONTRACTOR SHALL EXPOSE THE AT&T TEXAS/SWBT FACILITIES.
- WHEN AT&T TEXAS/SWBT FACILITIES ARE EXPOSED, THE CONTRACTOR WILL PROVIDE SUPPORT TO PREVENT DAMAGE TO THE CONDUIT DUCTS OR CABLES. WHEN EXCAVATING NEAR TELEPHONE POLES THE CONTRACTOR SHALL BRACE THE POLE FOR SUPPORT.
- THE PRESENCE OR ABSENCE OF AT&T TEXAS/SWBT UNDERGROUND CONDUIT FACILITIES OR BURIED CABLE FACILITIES SHOWN ON THESE PLANS DOES NOT MEAN THAT THERE ARE NO DIRECT BURIED CABLES OR OTHER CABLES IN CONDUIT IN THE AREA.
- PLEASE CONTACT THE AT&T TEXAS DAMAGE PREVENTION MANAGER MR. ROOSEVELT LEE JR. AT (713) 567-4552 OR EMAIL HIM AT r17259@att.com, IF THERE ARE QUESTIONS ABOUT BORING OR EXCAVATING NEAR OUR AT&T TEXAS/SWBT FACILITIES.

TO ARRANGE FOR LINES TO BE TURNED OFF OR MOVED, CALL CENTERPOINT AT 713-207-2222.
PRIVATE UTILITY LINES SHOWN AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.W. OR EASEMENTS CALL THE LONE STAR NOTIFICATION 713-223-4567.

[Signature] DATE: 10-20-15
I, THE SIGNATURE VERIFIER, GAS FACILITIES VERIFICATION ONLY. THIS SIGNATURE VERIFIES THAT YOU HAVE SHOWN ON NATURAL GAS LINES CORRECTLY NOT TO BE USED FOR CONFLICT VERIFICATION. I GAS SERVICE LINES ARE NOT SHOWN. SIGNATURE VALID FOR SIX MONTHS.

[Signature] DATE: 10/22/15
APPROVED FOR AT&T TEXAS/SWBT UNDERGROUND CONDUIT FACILITIES ONLY.
SIGNATURE VALID FOR ONE YEAR

[Signature] DATE: 10-20-15
I, THE SIGNATURE VERIFIER, UNDERGROUND ELECTRICAL FACILITIES VERIFICATION ONLY. THIS SIGNATURE VERIFIES EXISTING UNDERGROUND FACILITIES NOT TO BE USED FOR CONFLICT VERIFICATION. SIGNATURE VALID FOR SIX MONTHS.



SUPPLIED BY: LANDTECH P-4516

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

GENERAL CONSTRUCTION AND PRIVATE UTILITY NOTES SHEET 1 OF 1

WBS NUMBER: M-000285-0001-4
DRAWING SCALE: NTS
CITY OF HOUSTON PM: JEFFREY T. HALL, P.E.
SHEET NO. 3 OF 385



DATE: 10/19/2015 7:30:59 AM
\\V0000001\CAD\DWG\2015\10\19\1507101.dwg User: jwh

DATE PLOTTED: 10/22/15 10:58:11 AM

CIVIL LEGEND

PLAN VIEW

	IRON PIPE OR IRON ROD MONUMENTS SURVEY MONUMENT		CENTERPOINT ENERGY CONDUIT & MANHOLE
	TRANSIT LINE (BASE LINE)		POWER POLE W/ OVERHEAD LINES
	EXISTING RIGHT-OF-WAY		POWER POLE DOWN GUY
	PROPERTY LINE		SWBT CONTROLLER BOX
	LOT LINE		AT&T TEXAS/SWBT MANHOLE & CONDUIT
	EASEMENT LINE		TELEPHONE BOX
	DIMENSION LINE		STREET OR YARD LIGHT
	EDGE OF PAVEMENT		TRAFFIC SIGNAL POLE
	CURB AND GUTTER		ELECTRICAL JUNCTION OR PULL BOX
	EDGE OF ASPHALT		PIPELINE MARKERS AND/OR VENTS
	EDGE OF GRAVEL OR DIRT DRIVE		SMALL SIGN
	RAILROAD		SIGN POST
	SIDEWALK		FENCE LINE (CHAIN LINK OR OTHER)
	GUARD RAIL		FENCE LINE (BARBED WIRE)
	CONCRETE BARRIER		SOIL BORING
	GUARD POST		NORTH OR EAST PROPERTY LINE
	RIPRAP		SOUTH OR WEST PROPERTY LINE
	TREE		NORTH OR EAST DITCH OR CURB
	HEDGE		SOUTH OR WEST DITCH OR CURB
	BUILDING		SANITARY SEWER LINE EXISTING SANITARY SEWER & MANHOLE
	POST		PROPOSED SANITARY SEWER LINE & MANHOLE
	STREAM		STORM SEWER LINE
	SPOT ELEVATION		STORM SEWER LINE & MANHOLE
	WATER LINE		CURB INLET >
	WATER VALVE		PROPOSED STORM SEWER LINE & MANHOLE
	FIRE HYDRANT		PROPOSED CURB INLET >
	WATER METER		CULVERT
	CENTERPOINT ENERGY GAS LINE		GRATE INLET
	CENTERPOINT ENERGY CONDUIT		DITCHES, LEFT AND RIGHT

PROFILE VIEW

	CENTERPOINT ENERGY MCO		EXIST 24" STM SEW		CENTERPOINT ENERGY MANHOLE
	CENTERPOINT ENERGY CONDUIT		EXIST 30" STM SEW		AT&T TEXAS/SWBT TELEPHONE MANHOLE
	CENTERPOINT ENERGY GAS LINE		EXIST 12" WATER		EXISTING SANITARY SEWER MANHOLE AND CLEANOUT
	SOUTH-WESTERN BELL TELEPHONE CONDUIT		WATER LINE (14" & LARGER)		PROPOSED SANITARY SEWER MANHOLE
	8" CENTERPOINT ENERGY		SANITARY SEWER LINE (24" AND SMALLER)		STORM SEWER MANHOLE
	WATER LINE (14" & LARGER)		SANITARY SEWER LINE (30" AND LARGER)		

ABBREVIATIONS

	AND	FL	FLOW LINE	PROTECT	PROTECTION
	AT	FLG	FLANGE	PS	PUMP STATION
	ACREAS	FLR	FLOOR	PSI	POUNDS PER SQUARE INCH
	ASPHALT CONCRETE PAVEMENT	FM	FORGE MAIN	PVC	POLYVINYL CHLORIDE
	ADJUSTMENT	FT	FEET	PVMT	PAVEMENT
	APPROXIMATE	FS	FOOTING	PW	PLANT WATER OR POTABLE WATER
	APARTMENTS	FSY	YIELD STRENGTH (PSI)	R	RADIUS OF CIRCULAR CURVE
	ASPHALT	GAL	GALLON	RCS	REINFORCED CONCRETE BOX
	ASSEMBLY	GALV	GALVANIZED	RCTSS	REGIONAL COMPUTERISED TRAFFIC SIGNAL SYSTEM
	AVERAGE	GPM	GALLONS PER MINUTE	RCP	REINFORCED CONCRETE PIPE
	AVERAGE	GWB	GATE VALVE AND BOX	RD	ROAD
	BOTTOM OF CURB	REL	REFERENCE	REF	REDUCER
	BACK OF CURB	REIN	REINFORCED, REINFORCING OR REINFORCEMENT	REG'D	REQUIRED
	BASE LINE	RF	RIGHT OF WAY	ROW	RIGHT OF WAY
	BEGINNING	RHW	RAW WASTEWATER	RJ	RESTRAINED JOINT
	BLIND FLANGE	S	SOUTH	SAN	SANITARY
	BACKFLOW PREVENTER	SCH	SCHEDULE	SCH OR SCHD	STORM DRAIN
	BORE HOLE	SD	SEWER	SEW OR SWR	SQUARE FEET
	BUILDING	SH	STATE HIGHWAY	SH	SHEET
	BOULEVARD	SHT	SIGNAL	SHT	SPECIFICATION
	BOULEVARD	SI	SIGNAL	SI	SIGNAL
	CENTER TO CENTER	SI	SIGNAL	SI	SIGNAL
	CEMENT	SI	SIGNAL	SI	SIGNAL
	CUBIC FEET	SI	SIGNAL	SI	SIGNAL
	CAST IRON	SI	SIGNAL	SI	SIGNAL
	CAST IRON PIPE	SI	SIGNAL	SI	SIGNAL
	CITY OF HOUSTON	SI	SIGNAL	SI	SIGNAL
	CLASS	SI	SIGNAL	SI	SIGNAL
	CLEARANCE	SI	SIGNAL	SI	SIGNAL
	CORRUGATED METAL PIPE	SI	SIGNAL	SI	SIGNAL
	CLEAN OUT	SI	SIGNAL	SI	SIGNAL
	CITY OF HOUSTON	SI	SIGNAL	SI	SIGNAL
	CONCRETE	SI	SIGNAL	SI	SIGNAL
	CONDUIT	SI	SIGNAL	SI	SIGNAL
	CONNECTION OR CONNECT	SI	SIGNAL	SI	SIGNAL
	CONSTRUCTION	SI	SIGNAL	SI	SIGNAL
	CONTINUOUS	SI	SIGNAL	SI	SIGNAL
	CORROSION	SI	SIGNAL	SI	SIGNAL
	CONCRETE TRAFFIC BARRIER	SI	SIGNAL	SI	SIGNAL
	DEGREE OF CURVE (ARC) DEFINITION	SI	SIGNAL	SI	SIGNAL
	DIAMETER	SI	SIGNAL	SI	SIGNAL
	DUCTILE IRON PIPE	SI	SIGNAL	SI	SIGNAL
	DISTANCE	SI	SIGNAL	SI	SIGNAL
	DRIVE	SI	SIGNAL	SI	SIGNAL
	DRAIN	SI	SIGNAL	SI	SIGNAL
	DETAIL	SI	SIGNAL	SI	SIGNAL
	DRIVEWAY	SI	SIGNAL	SI	SIGNAL
	DRAWING	SI	SIGNAL	SI	SIGNAL
	EAST	SI	SIGNAL	SI	SIGNAL
	EACH	SI	SIGNAL	SI	SIGNAL
	ECCENTRIC	SI	SIGNAL	SI	SIGNAL
	ELECTRIC DUCT BANK	SI	SIGNAL	SI	SIGNAL
	EFFLUENT	SI	SIGNAL	SI	SIGNAL
	ELECTRIC	SI	SIGNAL	SI	SIGNAL
	ELEVATION	SI	SIGNAL	SI	SIGNAL
	ELBOW	SI	SIGNAL	SI	SIGNAL
	EMBANKMENT	SI	SIGNAL	SI	SIGNAL
	EDGE OF PAVEMENT	SI	SIGNAL	SI	SIGNAL
	EXISTING	SI	SIGNAL	SI	SIGNAL
	EXPANSION	SI	SIGNAL	SI	SIGNAL
	FIELD BOOK	SI	SIGNAL	SI	SIGNAL
	COMPRESSIVE STRENGTH (PSI)	SI	SIGNAL	SI	SIGNAL
	FLANGED COUPLING ADAPTER	SI	SIGNAL	SI	SIGNAL
	FACE TO FACE	SI	SIGNAL	SI	SIGNAL
	FIRE HYDRANT	SI	SIGNAL	SI	SIGNAL
	FIGURE	SI	SIGNAL	SI	SIGNAL
	PROCESS AND INSTRUMENTATION DIAGRAM	SI	SIGNAL	SI	SIGNAL
	PLAIN END	SI	SIGNAL	SI	SIGNAL
	PROFESSIONAL ENGINEER	SI	SIGNAL	SI	SIGNAL
	PAGE	SI	SIGNAL	SI	SIGNAL
	PROPERTY LINE OR PIPE LINE	SI	SIGNAL	SI	SIGNAL
	PROFILE GRADE LINE	SI	SIGNAL	SI	SIGNAL
	POINT OF INTERSECTION	SI	SIGNAL	SI	SIGNAL
	PLATE	SI	SIGNAL	SI	SIGNAL
	POWER POLE	SI	SIGNAL	SI	SIGNAL
	PROPERTY LINE	SI	SIGNAL	SI	SIGNAL
	PROPOSED	SI	SIGNAL	SI	SIGNAL
	POTENTIALLY PETROLEUM CONTAMINATED AREA	SI	SIGNAL	SI	SIGNAL
	INCH	SI	SIGNAL	SI	SIGNAL
	INFLUENT SEWER	SI	SIGNAL	SI </tr	

SYMBOLS

	PLUG VALVE
	SWING CHECK VALVE

SDPS
Houston Storm Drainage
Program Support

PGAL

3015 W. 25th St.
Houston, Texas 77042
Phone (713) 922-1444
Fax (713) 968-9333

SURVEYED BY: LANDTECH
F.B. NO. P-15376

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

LEGEND AND ABBREVIATIONS

WBS NUMBER	M-000285-0001-4
DRAWING SCALE	NTS
CITY OF HOUSTON PM	JEFFREY T. HALL, P.E.
SHEET NO. 4 OF 385	

DATE: 9/30/2015 6:55:28 AM
DRAWING: C:\WORK\2015\201509\104\10412001.dwg

WAKEFIELD DRIVE

<* 5 DESCRIBE CHAIN H*WAKEFIELD

Chain H*WAKEFIELD contains:
6000 6001 6002 6003

Beginning chain H*WAKEFIELD description

Point 6000 X 3,103,306.9508 Y 13,865,400.6576 Sta 10+00.00
 Course from 6000 to 6001 N 87° 44' 02.15" E Dist 479.8487
 Point 6001 X 3,103,786.4242 Y 13,865,419.6309 Sta 14+79.85
 Course from 6001 to 6002 N 87° 44' 02.14" E Dist 50.0000
 Point 6002 X 3,103,836.3851 Y 13,865,421.6079 Sta 15+29.85
 Course from 6002 to 6003 N 87° 44' 02.15" E Dist 172.8837
 Point 6003 X 3,104,009.1337 Y 13,865,428.4437 Sta 17+02.73

Ending chain H*WAKEFIELD description

FISHER STREET

<* 6 DESCRIBE CHAIN H*FISHER

Chain H*FISHER contains:
6100 6101 6102 6103

Beginning chain H*FISHER description

Point 6100 X 3,102,917.4706 Y 13,865,877.6306 Sta 10+00.00
 Course from 6100 to 6101 N 87° 44' 02.15" E Dist 850.7300
 Point 6101 X 3,103,767.5354 Y 13,865,911.2685 Sta 18+50.73
 Course from 6101 to 6102 N 87° 44' 02.15" E Dist 50.0000
 Point 6102 X 3,103,817.4963 Y 13,865,913.2455 Sta 19+00.73
 Course from 6102 to 6103 N 87° 44' 02.15" E Dist 867.0606
 Point 6103 X 3,104,683.8789 Y 13,865,947.5292 Sta 27+67.79

Ending chain H*FISHER description

W 42ND STREET

<* 8 DESCRIBE CHAIN H*42

Chain H*42 contains:
4500 4501 4502 CUR H*42-1

Beginning chain H*42 description

Point 4500 X 3,103,658.4207 Y 13,866,812.6943 Sta 10+00.00
 Course from 4500 to 4501 S 84° 21' 22.41" E Dist 107.8036
 Point 4501 X 3,103,765.7016 Y 13,866,802.0925 Sta 11+07.80
 Course from 4501 to 4502 S 85° 24' 51.76" E Dist 60.2897
 Point 4502 X 3,103,825.7983 Y 13,866,797.2725 Sta 11+68.09
 Course from 4502 to PC H*42-1 S 84° 52' 53.41" E Dist 547.0394

Curve Data

Curve H*42-1
 P.I. Station 22+16.65 X 3,104,870.1748 Y 13,866,703.7245
 Delta = 19° 51' 29.00" (LT)
 Degree = 1° 59' 59.47"
 Tangent = 501.5184
 Length = 992.9759
 Radius = 2,865.0000
 External = 43.5642
 Long Chord = 988.0134
 Mid. Ord. = 42.9117
 P.C. Station 17+15.13 X 3,104,370.6563 Y 13,866,748.4679
 P.T. Station 27+08.11 X 3,105,355.1893 Y 13,866,831.3236
 C.C. Station 22+11.12 X 3,104,626.2597 Y 13,869,602.0431
 Back = S 84° 52' 53.41" E
 Ahead = N 75° 15' 37.59" E
 Chord Bear = N 85° 11' 22.99" E

Ending chain H*42 description

W 41ST STREET

<* 7 DESCRIBE CHAIN H*41

Chain H*41 contains:
CUR H*41-1 CUR H*41-2 CUR H*41-3 CUR H*41-4

Beginning chain H*41 description

Curve Data

Curve H*41-1
 P.I. Station 12+40.00 X 3,103,425.7284 Y 13,866,424.4527
 Delta = 10° 03' 56.00" (RT)
 Degree = 2° 06' 08.63"
 Tangent = 240.0004
 Length = 478.7657
 Radius = 2,725.2600
 External = 10.5474
 Long Chord = 478.1503
 Mid. Ord. = 10.5068
 P.C. Station 10+00.00 X 3,103,188.3915 Y 13,866,388.7959
 P.T. Station 14+78.77 X 3,103,665.6443 Y 13,866,418.0802
 C.C. Station 12+39.38 X 3,103,593.2828 Y 13,863,693.7810
 Back = N 81° 27' 21.41" E
 Ahead = S 88° 28' 42.59" E
 Chord Bear = N 86° 29' 19.41" E

Curve Data

Curve H*41-2
 P.I. Station 15+19.96 X 3,103,706.8214 Y 13,866,416.9864
 Delta = 0° 44' 53.26" (RT)
 Degree = 0° 54' 29.23"
 Tangent = 41.1917
 Length = 82.3822
 Radius = 6,309.2800
 External = 0.1345
 Long Chord = 82.3816
 Mid. Ord. = 0.1345
 P.C. Station 14+78.77 X 3,103,665.6443 Y 13,866,418.0802
 P.T. Station 15+61.15 X 3,103,747.9808 Y 13,866,415.3552
 C.C. Station 14+99.96 X 3,103,498.1195 Y 13,860,111.0247
 Back = S 88° 28' 42.59" E
 Ahead = S 87° 43' 49.32" E
 Chord Bear = S 88° 06' 15.96" E

Course from PT H*41-2 to PC H*41-3 S 89° 38' 41.80" E Dist 56.2806

Curve Data




Curve H*41-3
 P.I. Station 16+58.70 X 3,103,845.3589 Y 13,866,411.2762
 Delta = 1° 47' 03.67" (LT)
 Degree = 2° 09' 43.58"
 Tangent = 41.2676
 Length = 82.5285
 Radius = 2,650.0000
 External = 0.3213
 Long Chord = 82.5252
 Mid. Ord. = 0.3213
 P.C. Station 16+17.43 X 3,103,804.2603 Y 13,866,415.0064
 P.T. Station 16+99.96 X 3,103,886.5538 Y 13,866,408.8275
 C.C. Station 16+58.70 X 3,104,043.7969 Y 13,869,054.1562
 Back = S 84° 48' 49.99" E
 Ahead = S 86° 35' 53.67" E
 Chord Bear = S 85° 42' 21.83" E

Course from PT H*41-3 to PC H*41-4 S 86° 35' 53.67" E Dist 652.4200

Curve Data

Curve H*41-4
 P.I. Station 28+77.48 X 3,105,062.0048 Y 13,866,338.9566
 Delta = 18° 04' 57.10" (LT)
 Degree = 1° 44' 10.45"
 Tangent = 525.1057
 Length = 1,041.4799
 Radius = 3,300.0000
 External = 41.5170
 Long Chord = 1,037.1630
 Mid. Ord. = 41.0012
 P.C. Station 23+52.38 X 3,104,537.8243 Y 13,866,370.1148
 P.T. Station 33+93.86 X 3,105,569.9672 Y 13,866,472.0360
 C.C. Station 28+73.92 X 3,104,733.6364 Y 13,869,664.3002
 Back = S 86° 35' 53.67" E
 Ahead = N 75° 19' 09.17" E
 Chord Bear = N 84° 21' 37.75" E

Ending chain H*41 description

3131 BRANIFF PARK, SUITE 200
HOUSTON, TEXAS 77042
PHONE (713) 852-1844
FAX (713) 968-9333

SURVEYED BY: LANDTECH
F.B. NO. P-9576

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND
SHEPHERD PARK (CENTRAL)
DRAINAGE AND PAVING

GEOMETRIC DATA SUMMARY
SHEET 2 OF 5

WSS NUMBER	55630
M-000285-0001-4	
DRAWING SCALE	
NTS	
CITY OF HOUSTON PW	
JEFFREY T. HALL, P.E.	
SHEET NO. 6 OF 385	

LAMONTE LANE

◀ 9 DESCRIBE CHAIN H=LAMONTE

Chain H=LAMONTE contains:
CUR H=LAMONTE-1 CUR H=LAMONTE-2 4401 CUR H=LAMONTE-3 4402

Beginning chain H=LAMONTE description

Curve Data				
Curve H=LAMONTE-1				
P.I. Station	10+35.43	X	3,103,425.0461	Y 13,867,516.6103
Delta	2° 04' 57.48"	(RT)		
Degree	2° 56' 23.11"			
Tangent	35.4258			
Length	70.8438			
Radius	1,949.0000			
External	0.3219			
Long Chord	70.8399			
Mid. Ord.	0.3219			
P.C. Station	10+00.00	X	3,103,393.2214	Y 13,867,532.1724
P.T. Station	10+70.84	X	3,103,456.2842	Y 13,867,499.9019
C.C.		X	3,102,537.0508	Y 13,865,781.2947
Back	S 63° 56' 29.73" E			
Ahead	S 61° 51' 32.26" E			
Chord Bear	S 62° 54' 00.99" E			

Course from PT H=LAMONTE-1 to PC H=LAMONTE-2 S 61° 51' 32.25" E Dist 101.4400

Curve Data				
Curve H=LAMONTE-2				
P.I. Station	13+31.92	X	3,103,686.4985	Y 13,867,376.7670
Delta	11° 23' 44.44"	(LT)		
Degree	3° 34' 51.87"			
Tangent	159.6363			
Length	318.2194			
Radius	1,599.9600			
External	7.9441			
Long Chord	317.6952			
Mid. Ord.	7.9049			
P.C. Station	11+72.28	X	3,103,545.7329	Y 13,867,452.0584
P.T. Station	14+90.50	X	3,103,839.3653	Y 13,867,330.7728
C.C.		X	3,104,300.3438	Y 13,868,862.8860
Back	S 61° 51' 32.26" E			
Ahead	S 73° 15' 16.70" E			
Chord Bear	S 67° 33' 24.48" E			

Course from PT H=LAMONTE-2 to 4401 S 74° 24' 31.35" E Dist 60.8003

Point 4401 X 3,103,897.9284 Y 13,867,314.4313 Sta 15+51.30

Course from 4401 to PC H=LAMONTE-3 S 74° 07' 29.41" E Dist 417.3000

Curve Data				
Curve H=LAMONTE-3				
P.I. Station	23+26.65	X	3,104,643.6993	Y 13,867,102.5423
Delta	18° 05' 00.00"	(LT)		
Degree	2° 32' 47.32"			
Tangent	358.0425			
Length	710.1308			
Radius	2,250.0000			
External	25.3096			
Long Chord	707.1871			
Mid. Ord.	27.9578			
P.C. Station	19+68.60	X	3,104,299.3125	Y 13,867,200.2820
P.T. Station	26+78.73	X	3,105,001.4759	Y 13,867,116.1378
C.C.		X	3,104,914.7828	Y 13,869,364.4670
Back	S 74° 07' 29.41" E			
Ahead	N 87° 47' 30.59" E			
Chord Bear	S 83° 09' 59.41" E			

Course from PT H=LAMONTE-3 to 4402 N 87° 47' 30.59" E Dist 226.1934

Point 4402 X 3,105,227.5013 Y 13,867,124.8530 Sta 29+04.93

Ending chain H=LAMONTE description

W 43RD STREET

◀ 10 DESCRIBE CHAIN H=43

Chain H=43 contains:
CUR H=43-1 CUR H=43-2

Beginning chain H=43 description

Curve Data				
Curve H=43-1				
P.I. Station	10+65.72	X	3,103,831.3131	Y 13,867,719.7196
Delta	3° 16' 24.30"	(LT)		
Degree	2° 29' 28.04"			
Tangent	65.7224			
Length	131.4090			
Radius	2,300.0000			
External	0.9388			
Long Chord	131.3911			
Mid. Ord.	0.9384			
P.C. Station	10+00.00	X	3,103,769.9773	Y 13,867,743.3277
P.T. Station	11+31.41	X	3,103,893.8970	Y 13,867,699.6524
C.C.		X	3,104,596.1601	Y 13,869,889.8183
Back	S 68° 56' 53.94" E			
Ahead	S 72° 13' 18.75" E			
Chord Bear	S 70° 35' 06.34" E			

Course from PT H=43-1 to PC H=43-2 S 74° 35' 43.10" E Dist 61.3800

Curve Data				
Curve H=43-2				
P.I. Station	12+63.07	X	3,104,020.4611	Y 13,867,663.3942
Delta	1° 24' 35.29"	(LT)		
Degree	1° 00' 10.88"			
Tangent	70.2813			
Length	140.5554			
Radius	5,712.3100			
External	0.4323			
Long Chord	140.5519			
Mid. Ord.	0.4323			
P.C. Station	11+52.79	X	3,103,953.0718	Y 13,867,683.3478
P.T. Station	13+33.34	X	3,104,088.3209	Y 13,867,645.1047
C.C.		X	3,105,574.8552	Y 13,873,160.6011
Back	S 73° 30' 22.61" E			
Ahead	S 74° 54' 57.90" E			
Chord Bear	S 74° 12' 40.25" E			

Ending chain H=43 description

AZALEA STREET

◀ 11 DESCRIBE CHAIN H=AZALEA




Chain H=AZALEA contains:
CUR H=AZALEA-1

Beginning chain H=AZALEA description

Curve Data				
Curve H=AZALEA-1				
P.I. Station	16+13.45	X	3,104,554.9162	Y 13,867,897.3791
Delta	9° 21' 06.99"	(LT)		
Degree	0° 45' 50.20"			
Tangent	613.4456			
Length	1,224.1662			
Radius	7,500.0000			
External	25.0459			
Long Chord	1,222.8077			
Mid. Ord.	24.9625			
P.C. Station	10+00.00	X	3,103,959.3427	Y 13,868,044.3751
P.T. Station	22+24.17	X	3,105,166.4603	Y 13,867,849.1166
C.C.		X	3,105,756.5189	Y 13,875,325.8693
Back	S 76° 08' 08.45" E			
Ahead	S 85° 29' 15.44" E			
Chord Bear	S 80° 48' 41.94" E			

Ending chain H=AZALEA description

DATE: 9/20/2005 6:55:30 AM
\\MAP009\GIS\DRAWING\DATA\DWG\0511\0511_Lamonte.dwg

3131 IRIDAWAY, SUITE 200
HOUSTON, TEXAS 77042
PHONE (713) 622-1444
FAX (713) 969-9333

SURVEYED BY: LANTECH
F.B. NO.: P-0316

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

GEOMETRIC DATA SUMMARY
SHEET 3 OF 5

WSD NUMBER
M-000285-0001-4

DRAWING SCALE
NTS

CITY OF HOUSTON PM
JEFFREY T. HALL, P.E.

SHEET NO. 7 OF 385



SUE BARNETT DRIVE

<* 12 DESCRIBE CHAIN H*SUEBARNETT

Chain H*SUEBARNETT contains:
4100 CUR H*SUEBARNETT-1 4101 CUR H*SUEBARNETT-2

Beginning chain H*SUEBARNETT description

Point 4100 X 3,103,337.6880 Y 13,868,316.6025 Sta 10+00.00
Course from 4100 to PC H*SUEBARNETT-1 S 83° 05' 11.41" E Dist 146.1238

Curve Data

Curve H*SUEBARNETT-1
P.I. Station 13+77.40 X 3,103,712.3404 Y 13,868,271.1750
Delta = 14° 31' 04.00" (LT)
Degree = 3° 10' 59.16"
Tangent = 229.2727
Length = 456.0894
Radius = 1,800.0000
External = 14.5429
Long Chord = 454.8703
Mid. Ord. = 14.4264
P.C. Station 11+48.12 X 3,103,484.7348 Y 13,868,298.7727
P.T. Station 16+04.21 X 3,103,939.5968 Y 13,868,301.5147
C.C. = N 5° 83' 05" 11.41" E
Back = N 82° 23' 44.60" E
Ahead = N 69° 39' 16.59" E
Chord Bear = N 69° 39' 16.59" E

Course from PT H*SUEBARNETT-1 to 4101 N 76° 58' 38.80" E Dist 61.9567

Point 4101 X 3,103,999.9601 Y 13,868,315.4757 Sta 16+66.17

Course from 4101 to PC H*SUEBARNETT-2 N 81° 28' 46.96" E Dist 314.2619

Curve Data

Curve H*SUEBARNETT-2
P.I. Station 20+58.67 X 3,104,388.1316 Y 13,868,373.6289
Delta = 5° 51' 24.29" (RT)
Degree = 3° 44' 45.59"
Tangent = 78.2415
Length = 156.3468
Radius = 1,529.5200
External = 1.9999
Long Chord = 156.2788
Mid. Ord. = 1.9973
P.C. Station 19+80.43 X 3,104,310.7536 Y 13,868,362.0366
P.T. Station 21+36.78 X 3,104,466.2886 Y 13,868,377.2648
C.C. = N 81° 28' 46.96" E
Back = N 87° 20' 11.25" E
Ahead = N 84° 24' 29.11" E
Chord Bear = N 84° 24' 29.11" E

Ending chain H*SUEBARNETT description

DUNSMERE ROAD

<* 13 DESCRIBE CHAIN H*DUNSMERE

Chain H*DUNSMERE contains:
5201 5200

Beginning chain H*DUNSMERE description

Point 5201 X 3,104,482.6811 Y 13,868,808.6839 Sta 10+00.00

Course from 5201 to 5200 N 1° 55' 54.41" W Dist 234.7544

Point 5200 X 3,104,474.7676 Y 13,869,043.3048 Sta 12+34.75

Ending chain H*DUNSMERE description

CURTIN STREET

<* 14 DESCRIBE CHAIN H*CURTIN

Chain H*CURTIN contains:
6200 6201

Beginning chain H*CURTIN description

Point 6200 X 3,104,980.0427 Y 13,869,035.8572 Sta 10+00.00

Course from 6200 to 6201 N 87° 18' 54.65" E Dist 247.5627

Point 6201 X 3,105,227.3337 Y 13,869,047.4535 Sta 12+47.56

Ending chain H*CURTIN description

THORNTON ROAD

<* 15 DESCRIBE CHAIN H*THORNTON

Chain H*THORNTON contains:
CUR H*THORNTON-1 CUR H*THORNTON-2 6301 6302 6303

Beginning chain H*THORNTON description

Curve Data

Curve H*THORNTON-1
P.I. Station 10+24.37 X 3,104,763.7904 Y 13,869,413.7710
Delta = 5° 34' 53.44" (LT)
Degree = 11° 27' 32.96"
Tangent = 24.3732
Length = 48.7079
Radius = 500.0000
External = 0.5937
Long Chord = 48.6886
Mid. Ord. = 0.5930
P.C. Station 10+00.00 X 3,104,740.1009 Y 13,869,408.0385
P.T. Station 10+48.71 X 3,104,786.8100 Y 13,869,421.7804
C.C. = N 76° 23' 48.12" E
Back = N 70° 48' 54.69" E
Ahead = N 73° 36' 21.41" E
Chord Bear = N 73° 36' 21.41" E

Curve Data

Curve H*THORNTON-2
P.I. Station 11+24.23 X 3,104,858.1334 Y 13,869,446.5967
Delta = 17° 10' 40.16" (RT)
Degree = 11° 27' 33.78"
Tangent = 75.5174
Length = 149.9018
Radius = 499.9901
External = 5.6708
Long Chord = 149.3410
Mid. Ord. = 5.6072
P.C. Station 10+48.71 X 3,104,786.8100 Y 13,869,421.7804
P.T. Station 11+98.61 X 3,104,933.6045 Y 13,869,449.2414
C.C. = N 70° 48' 54.69" E
Back = N 87° 59' 34.85" E
Ahead = N 79° 24' 14.77" E
Chord Bear = N 79° 24' 14.77" E

Course from PT H*THORNTON-2 to 6301 N 87° 59' 34.85" E Dist 30.7897

Point 6301 X 3,104,964.3753 Y 13,869,450.3197 Sta 12+29.40

Course from 6301 to 6302 N 86° 54' 01.77" E Dist 30.2309

Point 6302 X 3,104,994.5620 Y 13,869,451.9543 Sta 12+59.63

Course from 6302 to 6303 N 87° 18' 54.65" E Dist 240.6923

Point 6303 X 3,105,234.9901 Y 13,869,463.2288 Sta 15+00.32

Ending chain H*THORNTON description

WOODCREST DRIVE

<* 16 DESCRIBE CHAIN H*WOODCREST

Chain H*WOODCREST contains:
6310 6311

Beginning chain H*WOODCREST description

Point 6310 X 3,104,948.7778 Y 13,869,862.9332 Sta 10+00.00

Course from 6310 to 6311 N 87° 18' 54.65" E Dist 222.0199

Point 6311 X 3,105,170.5540 Y 13,869,873.3330 Sta 12+22.02

Ending chain H*WOODCREST description

MARTIN STREET

<* 17 DESCRIBE CHAIN H*MARTIN

Chain H*MARTIN contains:
6320 6321

Beginning chain H*MARTIN description

Point 6320 X 3,104,934.6008 Y 13,870,237.9684 Sta 10+00.00

Course from 6320 to 6321 N 87° 18' 54.65" E Dist 249.5846

Point 6321 X 3,105,183.9114 Y 13,870,249.6594 Sta 12+49.58

Ending chain H*MARTIN description

DATE: 9/20/2005 6:56:59 AM
PROJECT: 9405-040-0000 DATA: 04/01/04 DRAWING: 04/01/04

DATE: 9/20/2005 6:56:59 AM
PROJECT: 9405-040-0000 DATA: 04/01/04 DRAWING: 04/01/04



CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

GEOMETRIC DATA SUMMARY SHEET 4 OF 5

WBS NUMBER	M-000285-0001-4
DRAWING SCALE	NTS
CITY OF HOUSTON PW	JEFFREY T. HALL, P.E.
SHEET NO. 8 OF 385	

OAK STREET

<* 18 DESCRIBE CHAIN H*OAK

Chain H*OAK contains:
6330 6331

Beginning chain H*OAK description

Point 6330 X 3,104,921.3417 Y 13,870,588.7210 Sta 10+00.00
Course from 6330 to 6331 N 87° 18' 54.65" E Dist 247.3719
Point 6331 X 3,105,168.4421 Y 13,870,600.3083 Sta 12+47.37

Ending chain H*OAK description

CANDLELIGHT LANE

<* 19 DESCRIBE CHAIN H*CANDLELIGHT

Chain H*CANDLELIGHT contains:
6370 6369

Beginning chain H*CANDLELIGHT description

Point 6370 X 3,104,614.6018 Y 13,870,919.3069 Sta 10+00.00
Course from 6370 to 6369 N 88° 04' 02.19" E Dist 294.0356
Point 6369 X 3,104,908.4701 Y 13,870,929.2235 Sta 12+94.04

Ending chain H*CANDLELIGHT description

JANISCH ROAD

<* 20 DESCRIBE CHAIN H*JANISH

Chain H*JANISH contains:
6340 6341

Beginning chain H*JANISH description

Point 6340 X 3,104,891.0281 Y 13,871,150.9379 Sta 10+00.00
Course from 6340 to 6341 N 87° 18' 54.65" E Dist 245.0864
Point 6341 X 3,105,135.8454 Y 13,871,162.4182 Sta 12+45.09

Ending chain H*JANISH description

LEHMAN STREET

<* 21 DESCRIBE CHAIN H*LEHMAN

Chain H*LEHMAN contains:
6363 6364 6365 6366

Beginning chain H*LEHMAN description

Point 6363 X 3,104,623.7357 Y 13,871,735.1186 Sta 10+00.00
Course from 6363 to 6364 N 87° 18' 02.89" E Dist 201.5229
Point 6364 X 3,104,825.0350 Y 13,871,744.6088 Sta 12+01.52
Course from 6364 to 6365 N 86° 21' 21.08" E Dist 59.9975
Point 6365 X 3,104,884.9112 Y 13,871,748.4222 Sta 12+61.52
Course from 6365 to 6366 N 87° 18' 54.65" E Dist 252.1853
Point 6366 X 3,105,136.8196 Y 13,871,760.2350 Sta 15+13.71

Ending chain H*LEHMAN description

JUDIWAY STREET

<* 4 DESCRIBE CHAIN H*JUDIWAY




Chain H*JUDIWAY contains:
6367 6368

Beginning chain H*JUDIWAY description

Point 6367 X 3,103,573.3270 Y 13,865,151.7555 Sta 10+00.00
Course from 6367 to 6368 N 87° 26' 08.27" E Dist 247.9407
Point 6368 X 3,103,821.0194 Y 13,865,162.8488 Sta 12+47.94

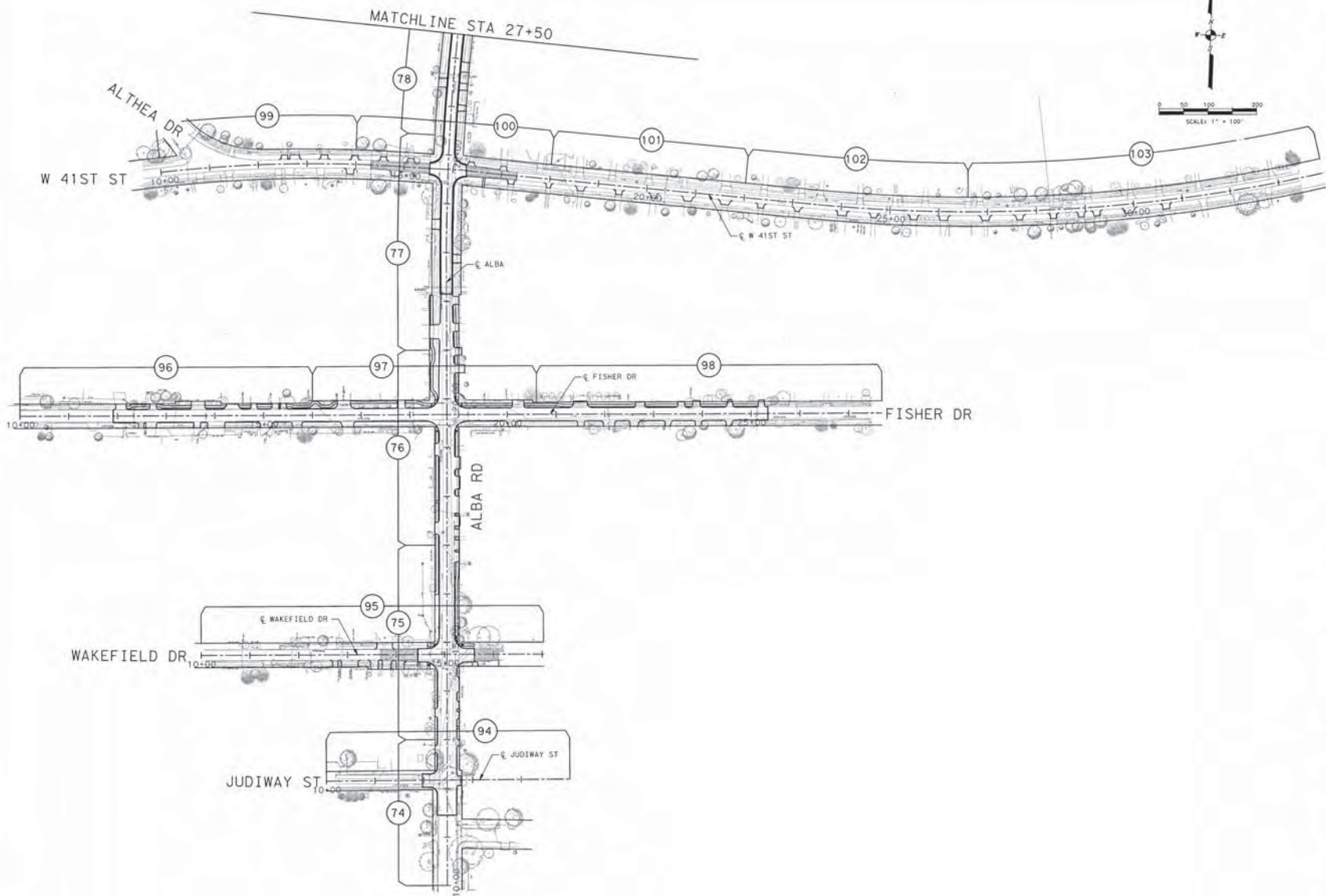
Ending chain H*JUDIWAY description

DATE: 04/20/2015 6:56:41 AM
PROJECT: C:\WORK\2015\150000\DWG\DWG\150000.dwg

 SDPS Houston Storm Drainage Program Support	
 PGAL 3121 BRADSHAW, SUITE 200 HOUSTON, TEXAS 77042 PHONE (713) 622-1444 FAX (713) 968-9333	 COSTAS E. LEONTOPOULOS 34255 REGISTERED PROFESSIONAL ENGINEER CIVIL STATE OF TEXAS
SURVEYED BY: LANDTECH FILE NO.: P-5516	
CITY OF HOUSTON DEPARTMENT OF PUBLIC WORKS AND ENGINEERING GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING	
GEOMETRIC DATA SUMMARY SHEET 5 OF 5	
NBS NUMBER M-000285-0001-4	 55630
DRAWING SCALE	
NTS	
CITY OF HOUSTON PM	
JEFFREY T. HALL, P.E. SHEET NO. 9 OF 385	

LEGEND

XX SHEET NUMBER



DATE: 6/10/05 6:56:40 AM
 A:\0220945-020\0001.DWG\DWG\DWG_PLOT.DWG



PGAL
 2004 REG.
 NO. 7-2513
 3131 BRANFORD, SUITE 200
 HOUSTON, TEXAS 77042
 PHONE (713) 622-1444
 FAX (713) 988-9333



SUPERVISED BY: LANDTECH
 P.E. NO. 19-0576

CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

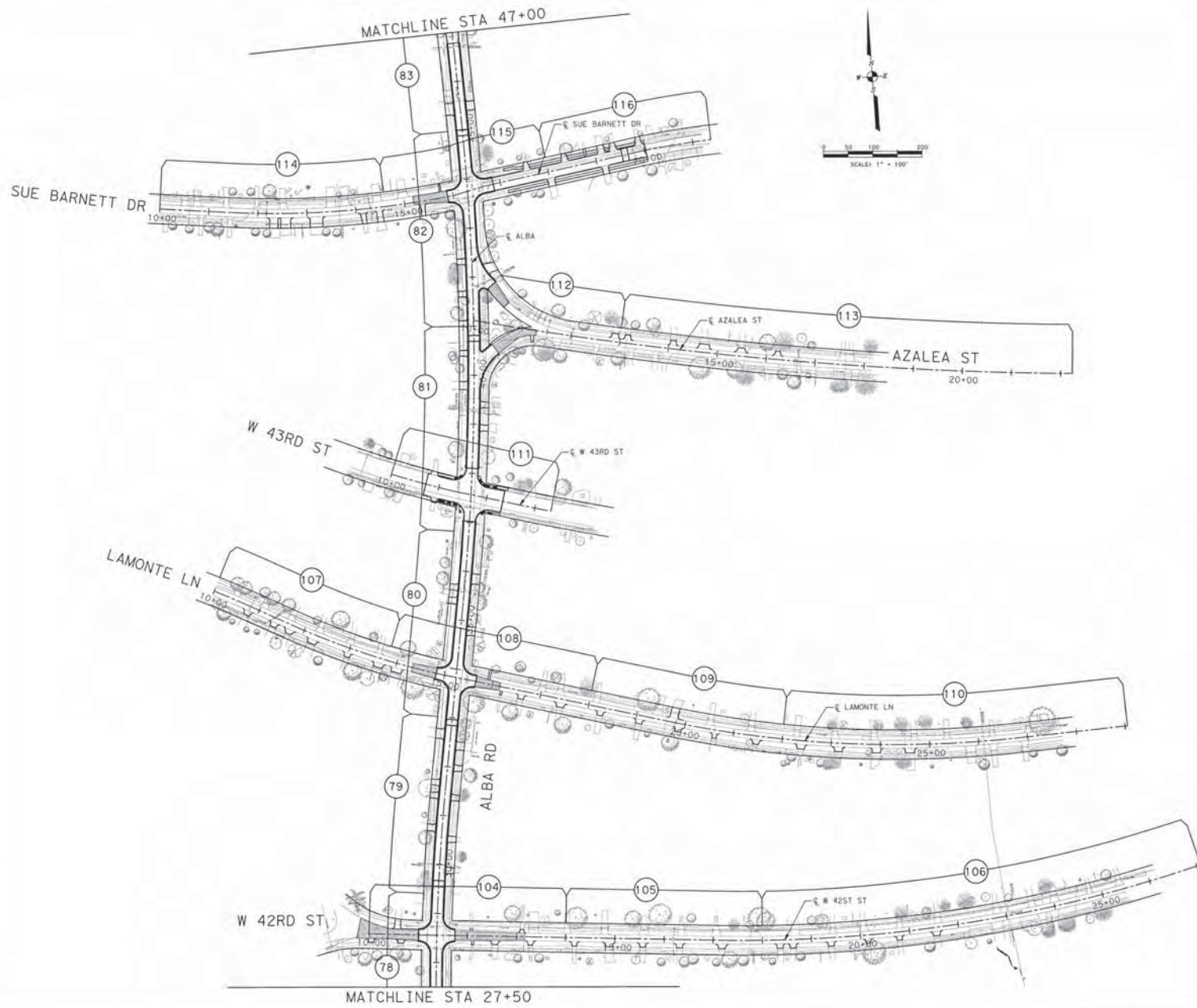
GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

PROJECT LAYOUT
 SHEET 1 OF 4

WBS NUMBER
 M-000285-0001-4
 DRAWING SCALE
 1"=100'
 CITY OF HOUSTON PW
 JEFFREY T. HALL, P.E.
 SHEET NO. 10 OF 385



DATE: 10/20/2015 6:55:51 AM
PLA0000945-10070000 D:\GIS\mxd\7102.dwg



LEGEND

XX SHEET NUMBER



PGAL
 INC. # 2562
 3133 BRANFARK, SUITE 200
 HOUSTON, TEXAS 77042
 PHONE (713) 522-1444
 FAX (713) 968-9333



SUPERVISED BY: LANDTECH P-5536
 P.E. NO.:

CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL)
 DRAINAGE AND PAVING

PROJECT LAYOUT
 SHEET 2 OF 4

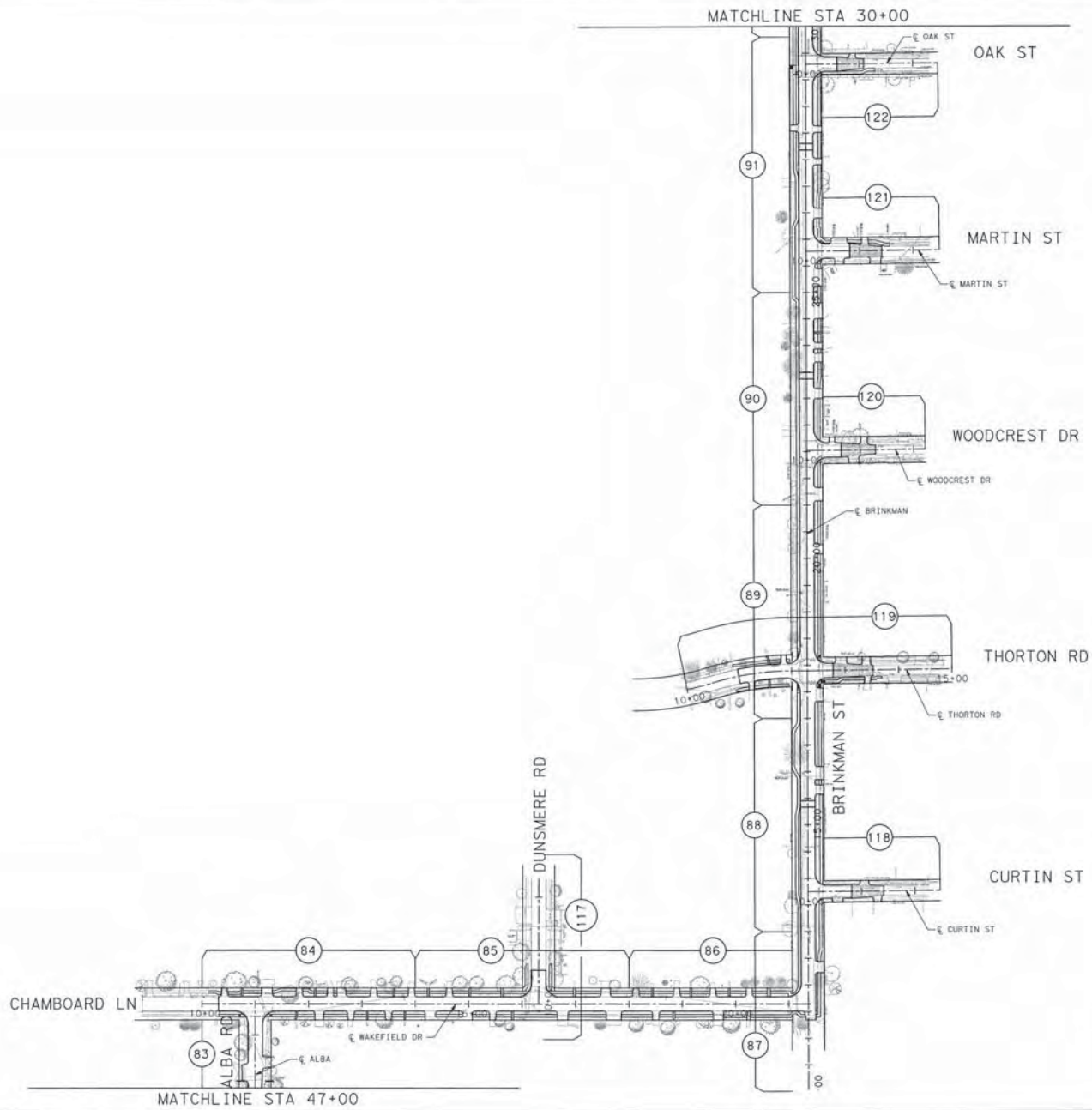
WBS NUMBER
 M-000285-0001-4

DRAWING SCALE
 1"=100'

CITY OF HOUSTON PM
 JEFFREY T. HALL, P.E.
 SHEET NO. 11 OF 385



DATE: 10/20/05 6:56:59 AM
 P:\000005\000000\000000\DWG\000004_P103.dwg



LEGEND

(XX) SHEET NUMBER

SCALE: 1" = 100'

<p>3131 BRAWFARK, SUITE 200 HOUSTON, TEXAS 77042 PHONE (713) 822-1444 FAX (713) 948-9333</p>	
<p>CITY OF HOUSTON DEPARTMENT OF PUBLIC WORKS AND ENGINEERING</p> <p>GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING</p> <p>PROJECT LAYOUT SHEET 3 OF 4</p>	
<p>WBS NUMBER M-000285-0001-4</p> <p>DRAWING SCALE 1"=100'</p> <p>CITY OF HOUSTON PM JEFFREY T. HALL, P.E.</p> <p>SHEET NO. 12 OF 385</p>	

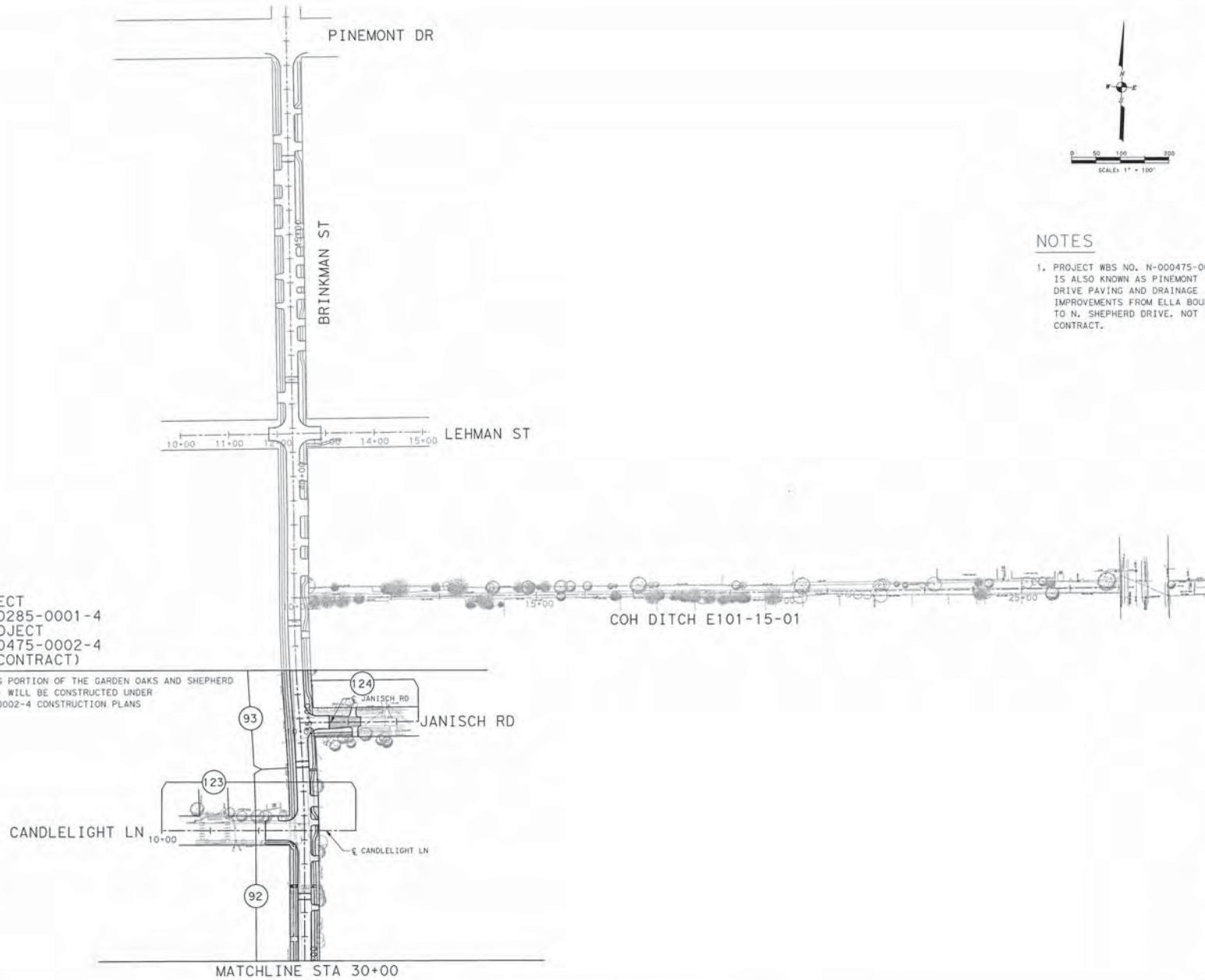
LEGEND

XX SHEET NUMBER



NOTES

- PROJECT WBS NO. N-000475-0002-4 IS ALSO KNOWN AS PINEMONT DRIVE PAVING AND DRAINAGE IMPROVEMENTS FROM ELLA BOULEVARD TO N. SHEPHERD DRIVE. NOT IN CONTRACT.



END PROJECT
 WBS: M-000285-0001-4
 BEGIN PROJECT
 WBS: N-000475-0002-4
 (NOT IN CONTRACT)

*THE REMAINING PORTION OF THE GARDEN OAKS AND SHEPHERD PARK (CENTRAL) WILL BE CONSTRUCTED UNDER WBS: N-000475-0002-4 CONSTRUCTION PLANS



PGAL
 3131 BRADSHAW, SUITE 200
 HOUSTON, TEXAS 77042
 PHONE (713) 622-1444
 FAX (713) 950-9333

STATE OF TEXAS
 COSTAS K. GEREMIS
 2005
 CIVIL ENGINEER
 LICENSE NO. 10000

SUPERVISED BY: LANDTECH
 P-85176

CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

PROJECT LAYOUT
 SHEET 4 OF 4

WBS NUMBER	M-000285-0001-4
DRAWING SCALE	1"=100'
CITY OF HOUSTON PM	JEFFREY T. HALL, P.E.
SHEET NO.	13 OF 385



DATE: 04/20/05 8:46:00 AM
 A:\020045-0001\0001.DWG
 D:\0504094\1\04.dwg

DATE: 9/30/05
DRAWN BY: JTH
CHECKED BY: JTH
SCALE: 1" = 100'



LEGEND

- PROPOSED EDGE OF PAVEMENT
- PROPOSED STORM SEWER
- PROPOSED INLET
- PROPOSED MANHOLE
- PROPOSED JUNCTION BOX



NOTES

1. PROJECT WBS NO. N-000475-0002-4 IS ALSO KNOWN AS PINEMONT DRIVE PAVING AND DRAINAGE IMPROVEMENTS FROM ELLA BOULEVARD TO N. SHEPHERD DRIVE. NOT IN CONTRACT.

END PROJECT
WBS:M-000285-0001-4
BEGIN PROJECT
WBS:N-000475-0002-4
(NOT IN CONTRACT)

*THE REMAINING PORTION OF THE GARDEN OAKS AND SHEPHERD PARK (CENTRAL) WILL BE CONSTRUCTED UNDER WBS:N-000475-0002-4 CONSTRUCTION PLANS

COH DITCH E101-15-01

SHEPHERD DR



PGAL
3131 BROADWAY, SUITE 200
HOUSTON, TEXAS 77042
PHONE (713) 622-1444
FAX (713) 968-9333



SUPERVISED BY: LANDTECH
P.E. NO. 10174

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

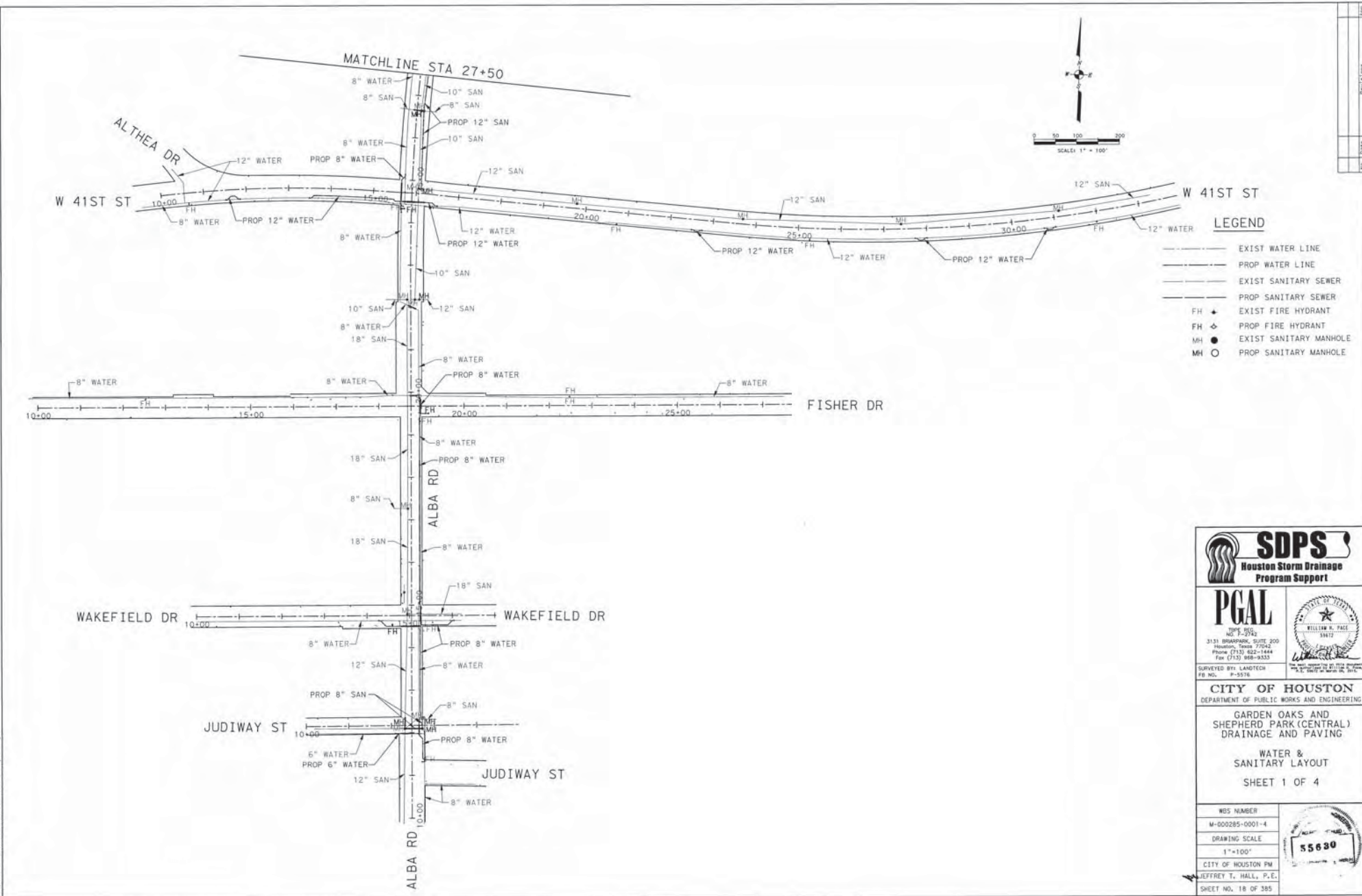
GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

DRAINAGE AND PAVEMENT LAYOUT
SHEET 4 OF 4

WBS NUMBER	M-000285-0001-4
DRAWING SCALE	1"=100'
CITY OF HOUSTON PM	JEFFREY T. HALL, P.E.
SHEET NO.	17 OF 385



DATE: 9/30/05
DRAWN BY: JTH
CHECKED BY: JTH
SCALE: 1" = 100'



LEGEND

---	EXIST WATER LINE
- - -	PROP WATER LINE
---	EXIST SANITARY SEWER
- - -	PROP SANITARY SEWER
FH ◆	EXIST FIRE HYDRANT
FH ◇	PROP FIRE HYDRANT
MH ●	EXIST SANITARY MANHOLE
MH ○	PROP SANITARY MANHOLE

SDPS
Houston Storm Drainage Program Support

PGAL
Professional Geometric Associates, L.P.
3151 BRIARPARK, SUITE 200
Houston, Texas 77042
Phone (713) 622-1444
Fax (713) 948-9333

SURVEYED BY: LANDTECH
FB NO. P-5576

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

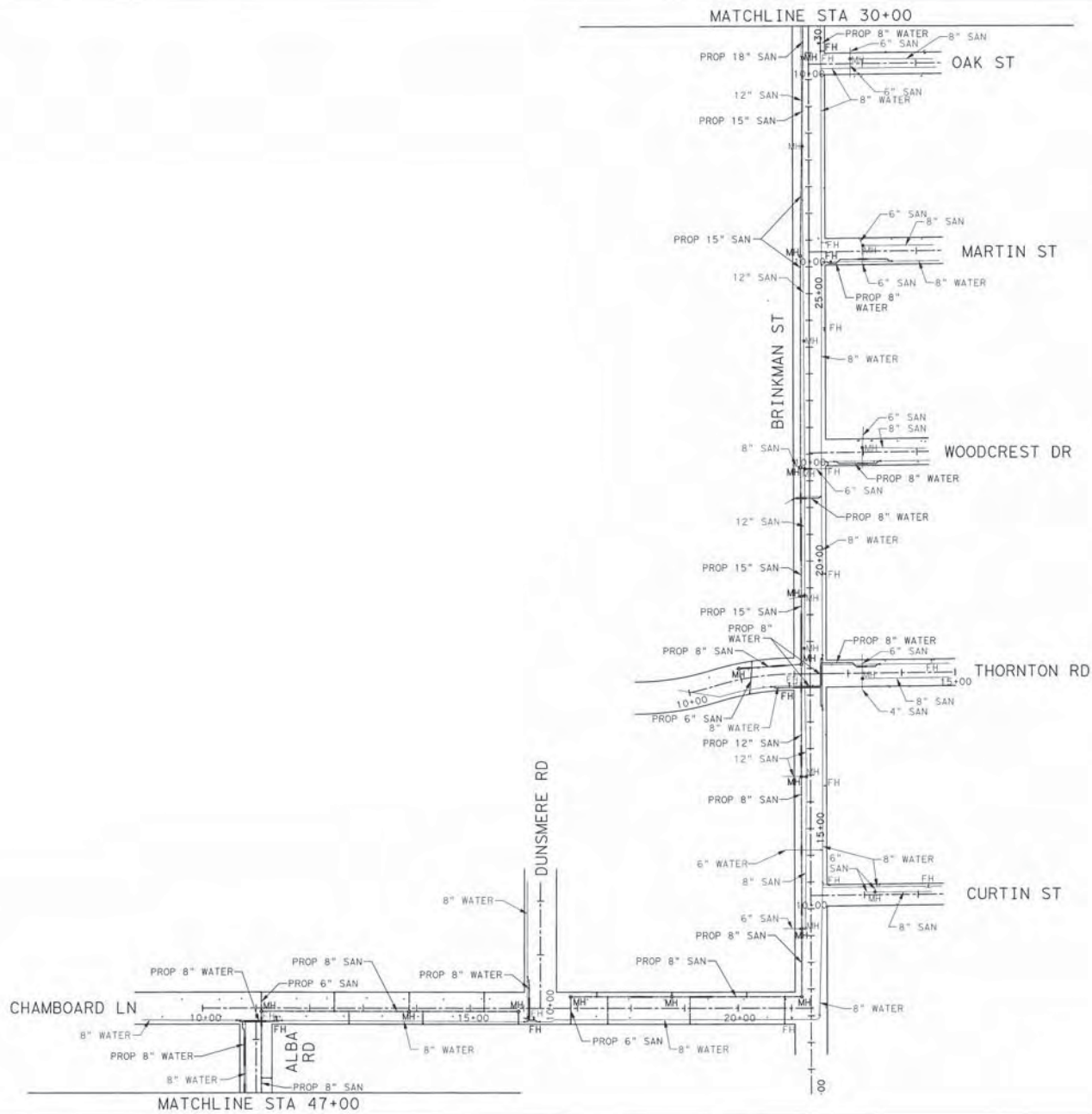
GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

WATER & SANITARY LAYOUT

SHEET 1 OF 4





WDS NUMBER	M-000285-0001-4
DRAWING SCALE	1"=100'
CITY OF HOUSTON PM	JEFFREY T. HALL, P.E.
SHEET NO. 18 OF 385	

DATE: 9/20/2015 6:56:31 AM
 P:\020285\0001\0001\DWG\CONV\CONV_WaterSan Layout 03.dwg



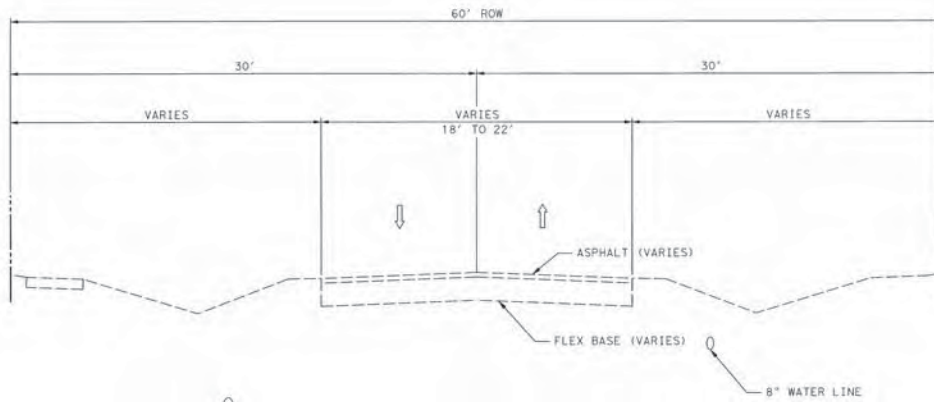
LEGEND

- — — — — EXIST WATER LINE
- — — — — PROP WATER LINE
- — — — — EXIST SANITARY SEWER
- — — — — PROP SANITARY SEWER
- FH + EXIST FIRE HYDRANT
- FH ◊ PROP FIRE HYDRANT
- MH ● EXIST SANITARY MANHOLE
- MH ○ PROP SANITARY MANHOLE

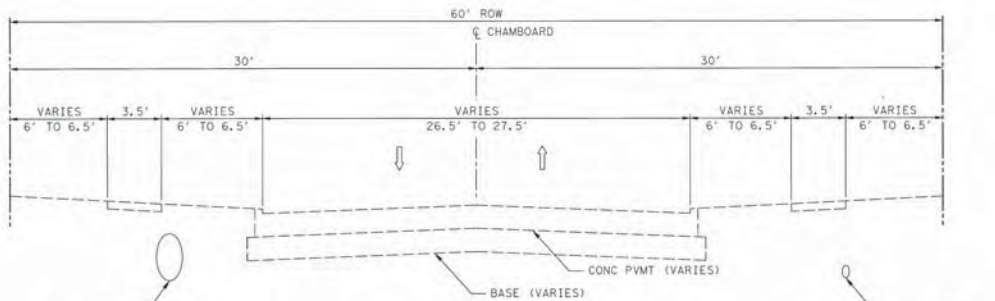
	
 <p style="font-size: small;"> 3131 BIRNAPARK, SUITE 200 HOUSTON, TEXAS 77042 PHONE (713) 822-1844 FAX (713) 968-9333 </p>	 <p style="font-size: x-small;"> SURVEYED BY: LANDTECH FIB NO.: P-0076 </p>
CITY OF HOUSTON DEPARTMENT OF PUBLIC WORKS AND ENGINEERING	
GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING	
WATER & SANITARY LAYOUT	
SHEET 3 OF 4	
WBS NUMBER M-000285-0001-4 DRAWING SCALE 1"=100' CITY OF HOUSTON PW JEFFREY T. HALL, P.E. SHEET NO. 20 OF 385	

NOTES:

1. REFER TO BORING LOGS IN GEOTECHNICAL INVESTIGATION, REPORT NO. G13-211, DATED FEBRUARY 18, 2015, PREPARED BY ASSOCIATED TESTING LABORATORIES, INC., FOR MORE INFORMATION ON EXISTING PAVEMENT SECTIONS.






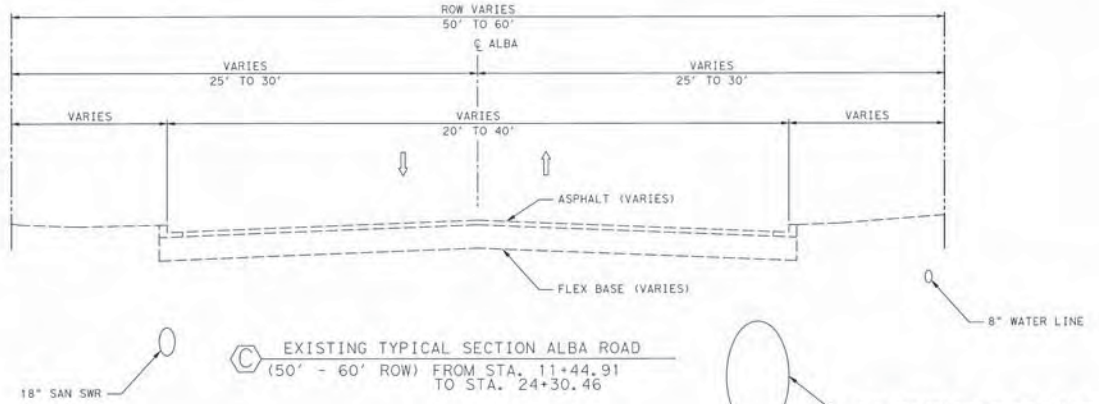
A EXISTING TYPICAL SECTION BRINKMAN STREET
(60' ROW) FROM STA. 11+50 TO STA. 49+00



B EXISTING TYPICAL SECTION CHAMBOARD LANE
(60' ROW) FROM STA. 10+00 TO STA. 21+07

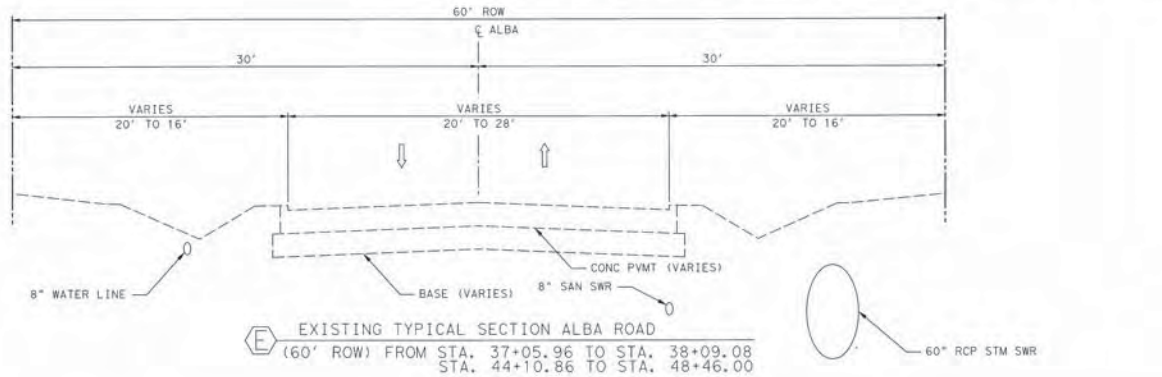
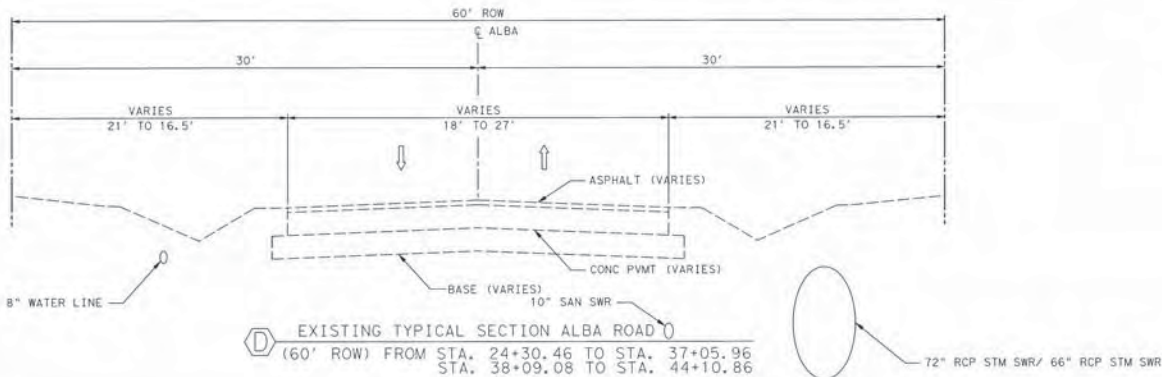
DATE: 9/30/2015 4:56:39 AM C:\WORK\AS\DWG\DWG\SECTION\SECTION.dwg

 <p>SDPS Houston Storm Drainage Program Support</p>	
 <p>PGAL 3001 WES NO. F-2522 3131 BRADSHAW, SUITE 200 HOUSTON, TEXAS 77042 PHONE (713) 622-1444 FAX (713) 968-9333</p>	 <p>COSTAS A. GEORGIADIS REGISTERED PROFESSIONAL ENGINEER NO. 10000 STATE OF TEXAS</p>
<p>SURVEYED BY: LANTECH F.B. NO.: P-0376</p>	
<p>CITY OF HOUSTON DEPARTMENT OF PUBLIC WORKS AND ENGINEERING GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING EXISTING TYPICAL SECTIONS SHEET 1 OF 12</p>	
<p>WDS NUMBER M-000285-0001-4 DRAWING SCALE NTS CITY OF HOUSTON PM JEFFREY T. HALL, P.E. SHEET NO. 22 OF 385</p>	



NOTES:

1. REFER TO BORING LOGS IN GEOTECHNICAL INVESTIGATION, REPORT NO. G13-211, DATED FEBRUARY 18, 2015, PREPARED BY ASSOCIATED TESTING LABORATORIES, INC., FOR MORE INFORMATION ON EXISTING PAVEMENT SECTIONS.

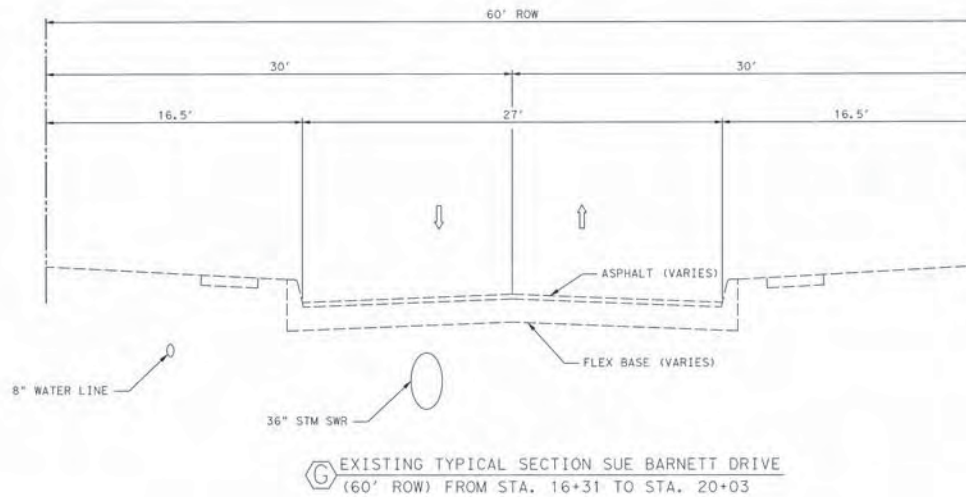
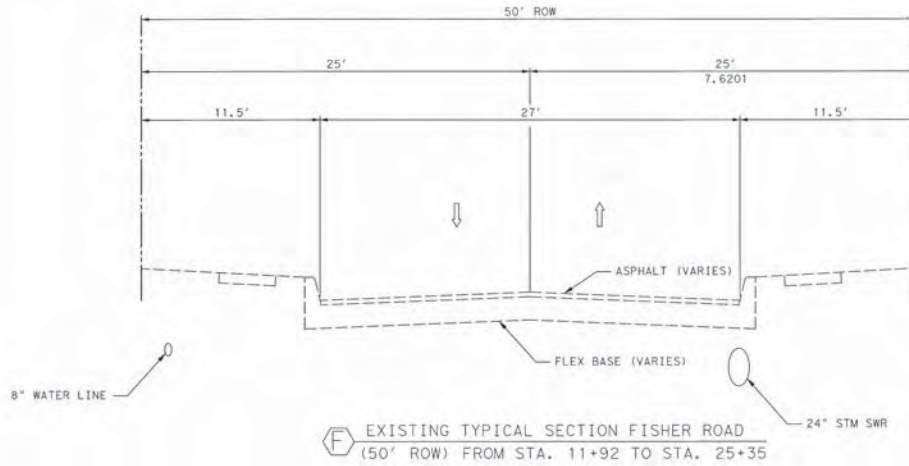


DATE: 9/20/2015 6:56:40 AM
 P:\0000945-02015000_DWG\SWR\0594.RVT_E-K-SECTION_02.dwg

 <small>3096 1952 NO. T-2742 3131 BRIMMINGHAM, SUITE 200 HOUSTON, TEXAS 77042 PHONE (713) 622-1444 FAX (713) 968-9333</small>	
<small>SURVEYED BY: LANDTECH P-43716</small>	
CITY OF HOUSTON DEPARTMENT OF PUBLIC WORKS AND ENGINEERING GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING EXISTING TYPICAL SECTIONS SHEET 2 OF 12	
<small>WBS NUMBER M-000285-0001-4</small>	
<small>DRAWING SCALE NTS CITY OF HOUSTON PM JEFFREY T. HALL, P.E. SHEET NO. 23 OF 385</small>	

NOTES:

1. REFER TO BORING LOGS IN GEOTECHNICAL INVESTIGATION, REPORT NO. G13-211, DATED FEBRUARY 18, 2015, PREPARED BY ASSOCIATED TESTING LABORATORIES, INC., FOR MORE INFORMATION ON EXISTING PAVEMENT SECTIONS.



SURVEYED BY: LANDTECH
P-0376

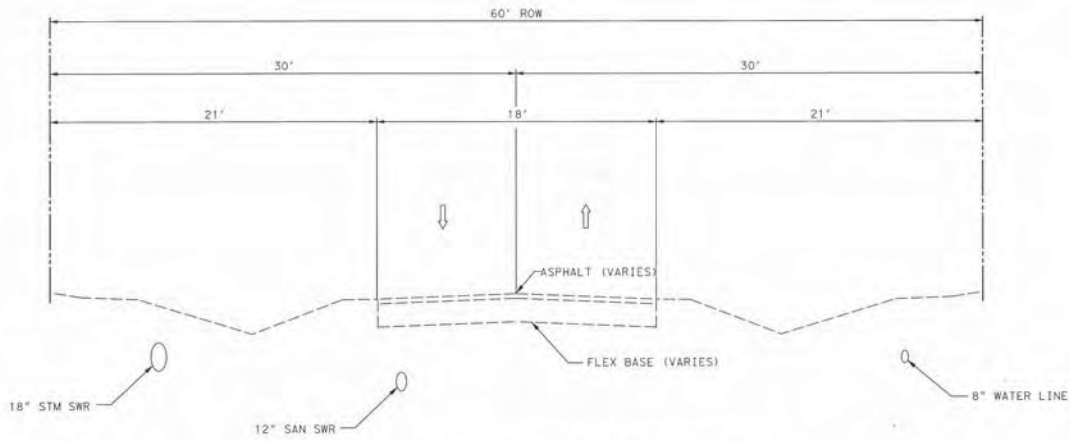
CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

EXISTING TYPICAL SECTIONS
SHEET 3 OF 12

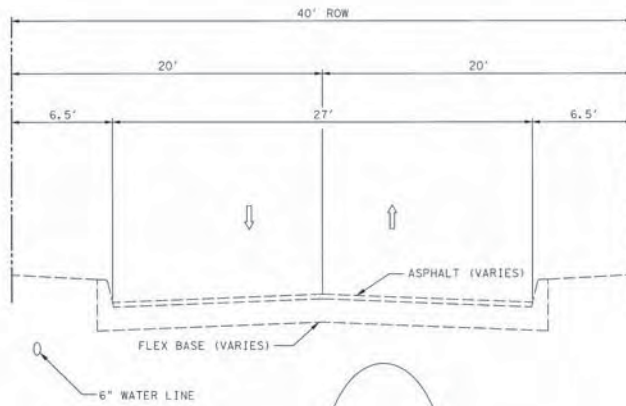
WBS NUMBER	M-000285-0001-4
DRAWING SCALE	NTS
CITY OF HOUSTON PW	JEFFREY T. HALL, P.E.
SHEET NO. 24 OF 385	



DATE: 9/21/2015 6:56:41 AM
P:\A02045-240\0000_DRAIN\DWG\1059871P_E.L.K-SECTION 03.dwg



G EXISTING TYPICAL SECTION SUE BARNETT DRIVE
(60' ROW) FROM STA. 15+72 TO STA. 16+31





H EXISTING TYPICAL SECTION JUDIWAY STREET
(40' ROW) FROM STA. 11+97 TO STA. 12+68

NOTES:

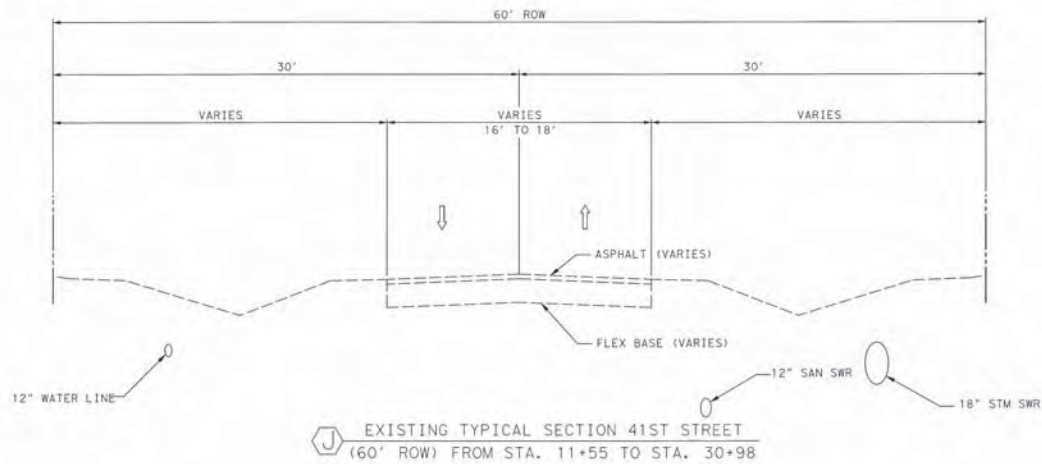
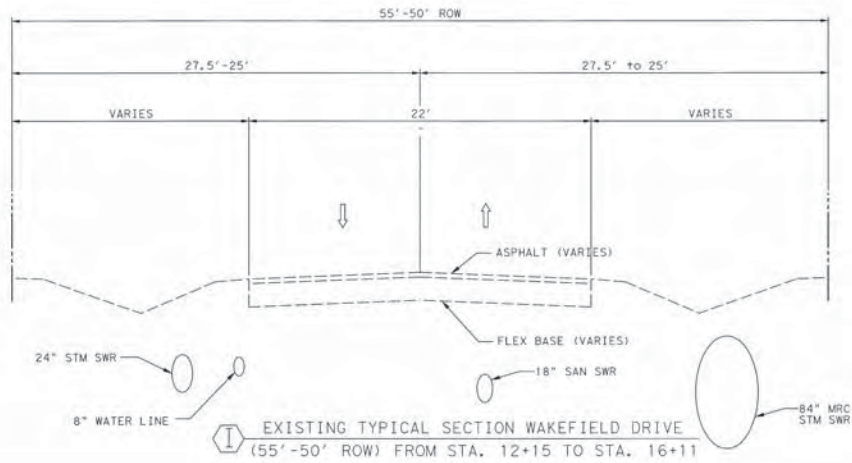
1. REFER TO BORING LOGS IN GEOTECHNICAL INVESTIGATION, REPORT NO. G13-211, DATED FEBRUARY 18, 2015, PREPARED BY ASSOCIATED TESTING LABORATORIES, INC., FOR MORE INFORMATION ON EXISTING PAVEMENT SECTIONS.

DATE: 9/10/2015 6:56:45 AM
PROJECT: 15-000285-0001-0001-DWG-CIVIL-001-01-01 E_A-SECTION-04.dwg

 <p>SDPS Houston Storm Drainage Program Support</p>	
 <p>PGAL 3895 WES NO. F-2542 3131 BRADSHAW, SUITE 200 HOUSTON, TEXAS 77042 PHONE (713) 622-1444 FAX (713) 968-9333</p>	 <p>COSTAS K. GEORGIOU 36785 LICENSED PROFESSIONAL ENGINEER STATE OF TEXAS</p>
<p>SURVEYED BY: LANDTECH F.B. NO.: P-9376</p>	
<p>CITY OF HOUSTON DEPARTMENT OF PUBLIC WORKS AND ENGINEERING GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING</p>	
<p>EXISTING TYPICAL SECTIONS SHEET 4 OF 12</p>	
<p>WBS NUMBER M-000285-0001-4</p>	
<p>DRAWING SCALE NTS</p>	
<p>CITY OF HOUSTON PM JEFFREY T. HALL, P.E.</p>	
<p>SHEET NO. 25 OF 385</p>	

NOTES:

1. REFER TO BORING LOGS IN GEOTECHNICAL INVESTIGATION, REPORT NO. G13-211, DATED FEBRUARY 18, 2015, PREPARED BY ASSOCIATED TESTING LABORATORIES, INC., FOR MORE INFORMATION ON EXISTING PAVEMENT SECTIONS.

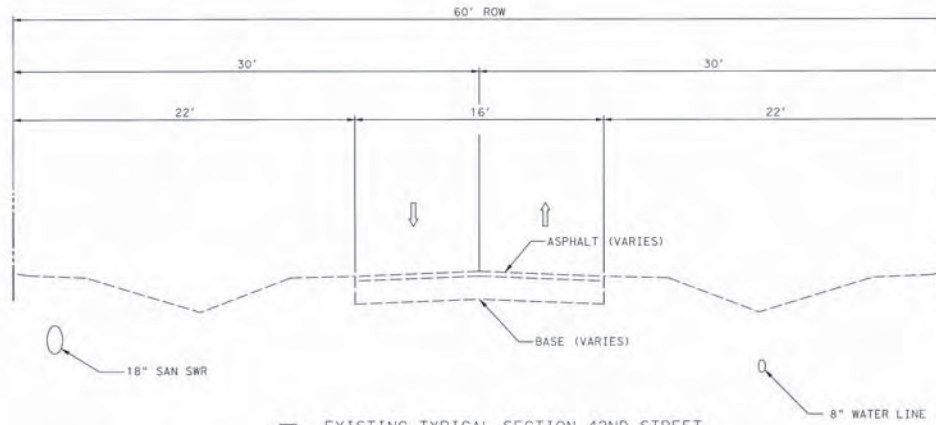


DATE: 9/23/2015 6:56:49 AM
P:\000045-CAD\0000-DWG\Drawings\998\998-F.LX SECTION 05.dwg

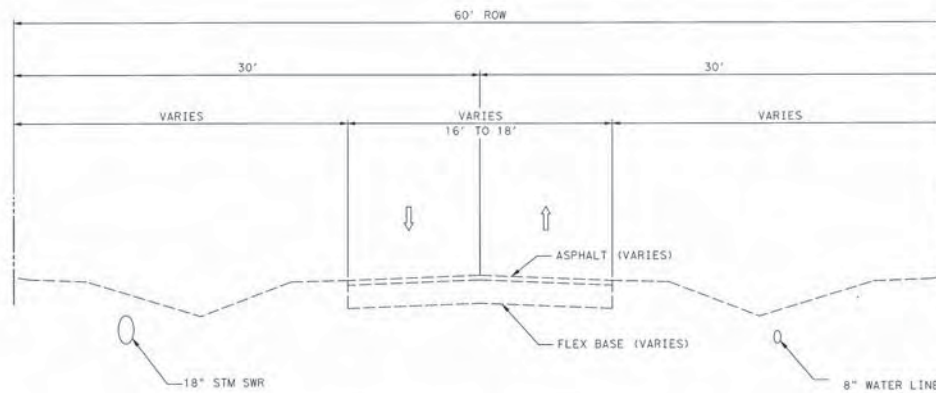
 TYPE REG. NO. F-2942 3131 BRINDLEY, SUITE 200 Houston, Texas 77042 Phone (713) 622-1444 Fax (713) 968-9333	
SURVEYED BY: LANSTECH F.B. NO.: 91-0316	
CITY OF HOUSTON DEPARTMENT OF PUBLIC WORKS AND ENGINEERING	
GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING	
EXISTING TYPICAL SECTIONS SHEET 5 OF 12	
WBS NUMBER M-000285-0001-4	
DRAWING SCALE	
NTS	
CITY OF HOUSTON PM	
JEFFREY T. HALL, P. E. SHEET NO. 26 OF 385	

NOTES:

1. REFER TO BORING LOGS IN GEOTECHNICAL INVESTIGATION, REPORT NO. G13-211, DATED FEBRUARY 18, 2015, PREPARED BY ASSOCIATED TESTING LABORATORIES, INC., FOR MORE INFORMATION ON EXISTING PAVEMENT SECTIONS.







(K) EXISTING TYPICAL SECTION 42ND STREET
(60' ROW) FROM STA. 10+34 TO STA. 22+48



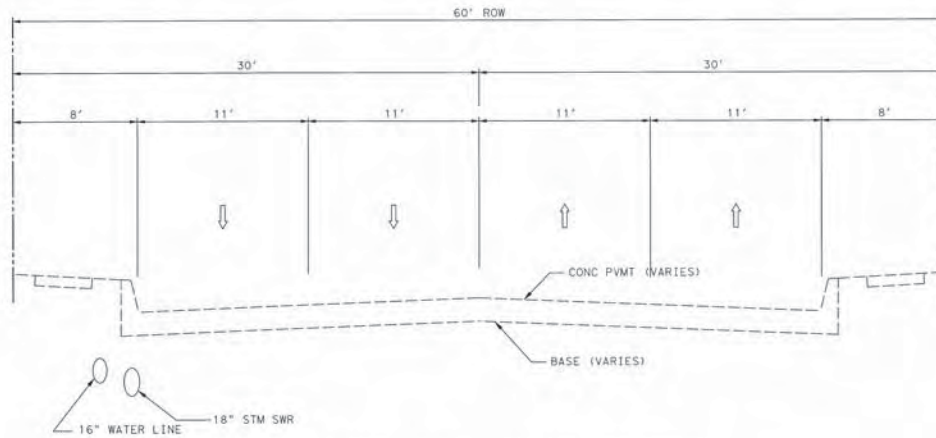
(L) EXISTING TYPICAL SECTION LAMONTE LANE
(60' ROW) FROM STA. 10+53 TO STA. 25+68

DATE: 9/20/2015 6:56:01 AM
DRAWN BY: J. J. SECTION 06-2P

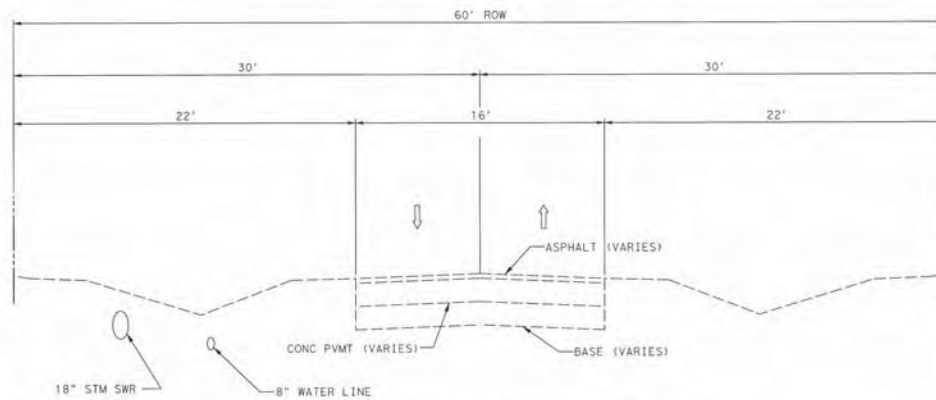
 <p>SDPS Houston Storm Drainage Program Support</p>	
 <p>PGAL TYPE REC. NO. F-2942 3131 SHIRAZIAN, SUITE 200 HOUSTON, TEXAS 77042 PHONE (713) 622-1444 FAX (713) 968-9333</p>	 <p>COSTAS E. GEORGAKOPOULOS 16233 LICENSED PROFESSIONAL ENGINEER STATE OF TEXAS</p>
<p>SURVEYED BY: LANDTECH FB NO. 9-5576</p>	
<p>CITY OF HOUSTON DEPARTMENT OF PUBLIC WORKS AND ENGINEERING</p>	
<p>GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING</p>	
<p>EXISTING TYPICAL SECTIONS SHEET 6 OF 12</p>	
<p>WBS NUMBER M-000285-0001-4</p>	
<p>DRAWING SCALE NTS</p>	<p>CITY OF HOUSTON PM JEFFREY T. HALL, P. E. SHEET NO. 27 OF 385</p>

NOTES:

1. REFER TO BORING LOGS IN GEOTECHNICAL INVESTIGATION, REPORT NO. G13-211, DATED FEBRUARY 18, 2015, PREPARED BY ASSOCIATED TESTING LABORATORIES, INC., FOR MORE INFORMATION ON EXISTING PAVEMENT SECTIONS.



M EXISTING TYPICAL SECTION 43RD STREET
(60' ROW) FROM STA. 10+73 TO STA. 12+33



N EXISTING TYPICAL SECTION AZALEA STREET
(60' ROW) FROM STA. 10+00 TO STA. 16+71



SURVEYED BY: LANDTECH
PR. NO. 04-0516

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

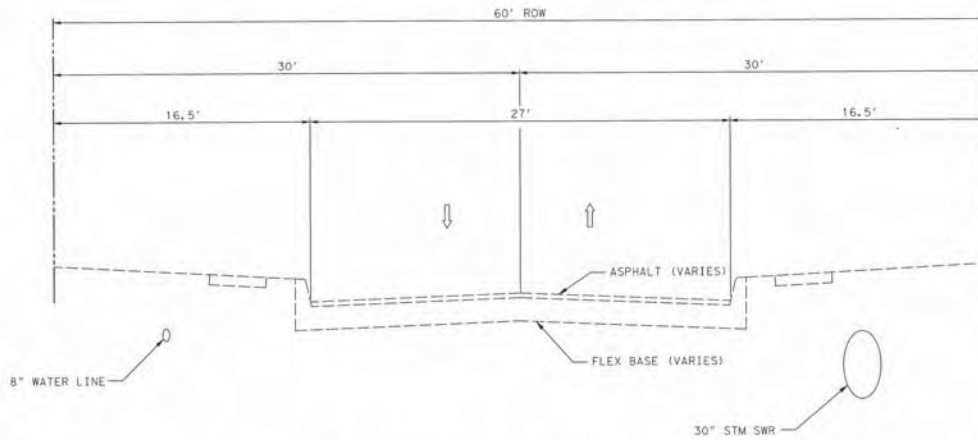
EXISTING TYPICAL SECTIONS
SHEET 7 OF 12

NBS NUMBER	
M-000285-0001-4	
DRAWING SCALE	
NTS	
CITY OF HOUSTON PW	
JEFFREY T. HALL, P.E.	
SHEET NO. 28 OF 385	

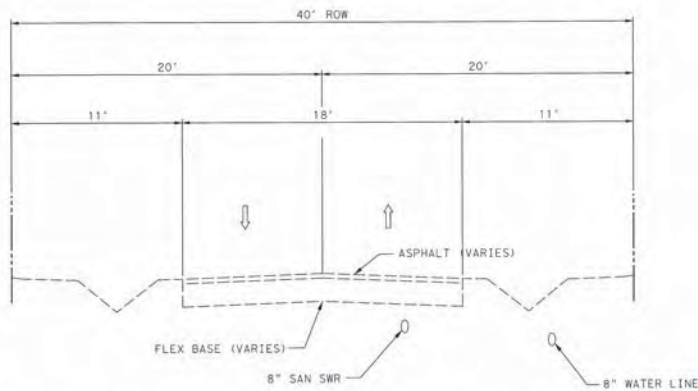
DATE: 9/30/2015 6:56:52 AM
A:\MDDP\AS-04\0300_DRAINAGE\04A-774_E-SECTION 07.dwg

NOTES:

1. REFER TO BORING LOGS IN GEOTECHNICAL INVESTIGATION, REPORT NO. G13-211, DATED FEBRUARY 18, 2015, PREPARED BY ASSOCIATED TESTING LABORATORIES, INC., FOR MORE INFORMATION ON EXISTING PAVEMENT SECTIONS.



EXISTING TYPICAL SECTION DUNSMERE ROAD
(60' ROW) FROM STA. 10+00 TO STA. 10+53



EXISTING TYPICAL SECTION CURTIN STREET
(40' ROW) FROM STA. 10+00 TO STA. 11+42



3131 BRAMPARK, SUITE 200
HOUSTON, TEXAS 77042
PHONE (713) 622-1444
FAX (713) 968-9333

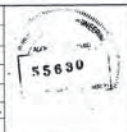


CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND
SHEPHERD PARK (CENTRAL)
DRAINAGE AND PAVING

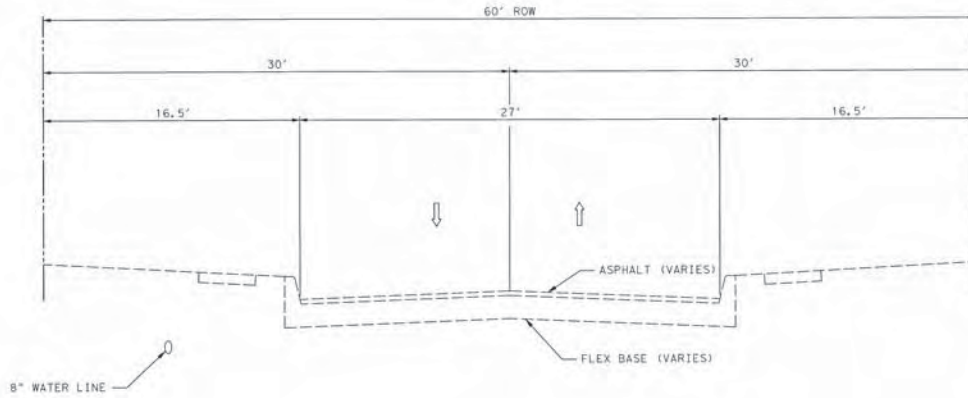
EXISTING TYPICAL SECTIONS
SHEET 8 OF 12

WBS NUMBER
M-000285-0001-4
DRAWING SCALE
NTS
CITY OF HOUSTON PM
JEFFREY T. HALL, P.E.
SHEET NO. 29 OF 385

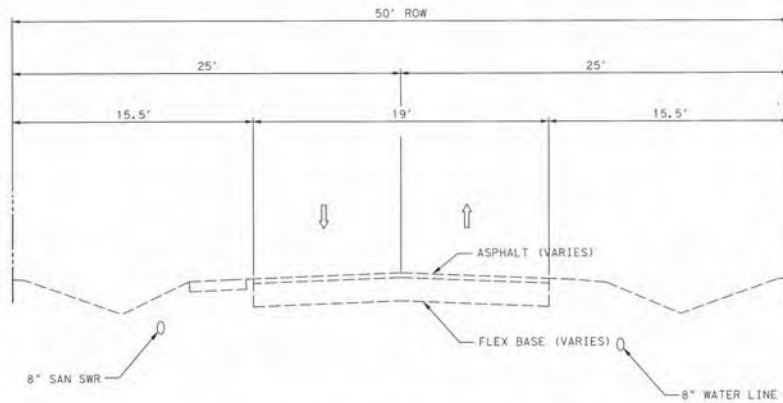


NOTES:

1. REFER TO BORING LOGS IN GEOTECHNICAL INVESTIGATION, REPORT NO. G13-211, DATED FEBRUARY 18, 2015, PREPARED BY ASSOCIATED TESTING LABORATORIES, INC., FOR MORE INFORMATION ON EXISTING PAVEMENT SECTIONS.



Q EXISTING TYPICAL SECTION THORNTON ROAD
(60' ROW) FROM STA. 11+00 TO STA. 12+34



R EXISTING TYPICAL SECTION THORNTON ROAD
(50' ROW) FROM STA. 12+34 TO STA. 13+53



SUPERVISED BY: LANDTECH
JOB NO. P-5574

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

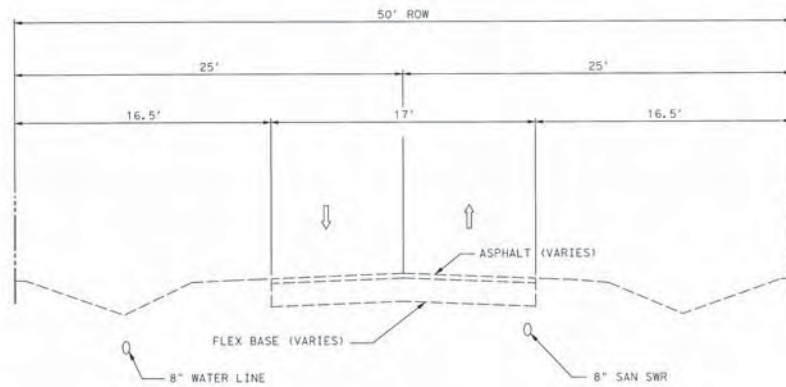
EXISTING TYPICAL SECTIONS
SHEET 9 OF 10

WSS NUMBER	M-000285-0001-4
DRAWING SCALE	NTS
CITY OF HOUSTON PM	JEFFREY T. HALL, P.E.
SHEET NO. 30 OF 385	

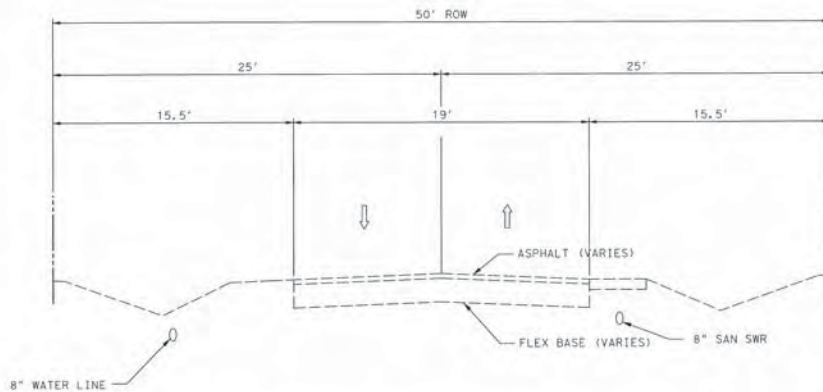
DATE: 9/20/2015 6:55:27 AM
A:\2015\15-0000\15-0000\DWG\15-0001\15-0001.dwg E:\SECTION 09.dwg

NOTES:

1. REFER TO BORING LOGS IN GEOTECHNICAL INVESTIGATION, REPORT NO. G13-211, DATED FEBRUARY 18, 2015, PREPARED BY ASSOCIATED TESTING LABORATORIES, INC., FOR MORE INFORMATION ON EXISTING PAVEMENT SECTIONS.



EXISTING TYPICAL SECTION WOODCREST DRIVE
(50' ROW) FROM STA. 10+00 TO STA. 11+29



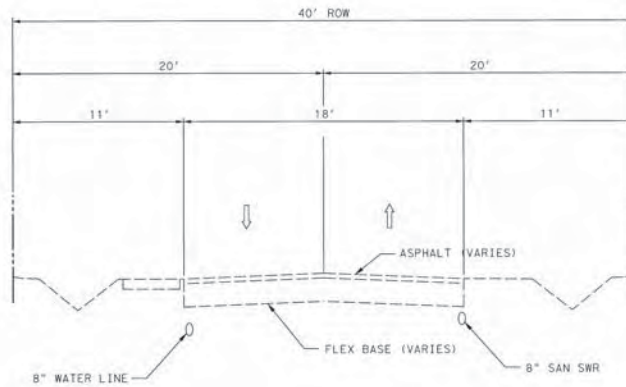
EXISTING TYPICAL SECTION MARTIN STREET
(50' ROW) FROM STA. 10+00 TO STA. 11+42

DATE: 9/20/2015 6:56:09 AM P:\000945\02\0001_D00\000004.dwg E:\SECTION\05.dgn

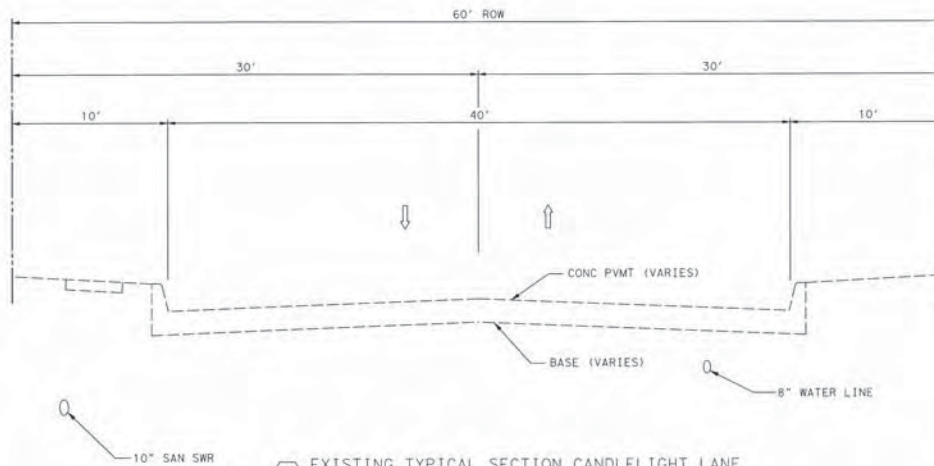
<p>3151 BIRMPARK, SUITE 200 Houston, Texas 77042 Phone: (713) 822-1444 Fax: (713) 968-9333</p>	
SURVEYED BY: LANGTECH PR NO.: 9-0316	
CITY OF HOUSTON DEPARTMENT OF PUBLIC WORKS AND ENGINEERING GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING	
EXISTING TYPICAL SECTIONS SHEET 10 OF 12	
WBS NUMBER M-000285-0001-4 DRAWING SCALE NTS CITY OF HOUSTON PM JEFFREY T. HALL, P.E. SHEET NO. 31 OF 385	

NOTES:

1. REFER TO BORING LOGS IN GEOTECHNICAL INVESTIGATION, REPORT NO. G13-211, DATED FEBRUARY 18, 2015, PREPARED BY ASSOCIATED TESTING LABORATORIES, INC., FOR MORE INFORMATION ON EXISTING PAVEMENT SECTIONS.





EXISTING TYPICAL SECTION OAK STREET
(40' ROW) FROM STA. 10+00 TO STA. 11+09



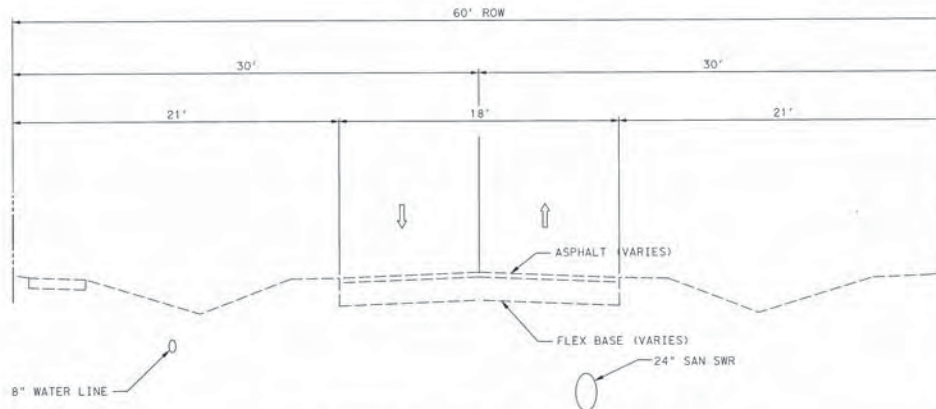
EXISTING TYPICAL SECTION CANDLELIGHT LANE
(60' ROW) FROM STA. 12+14 TO STA. 13+08

DATE: 9/20/2015 6:57:02 AM
\\M0009AS-CAD\000_DWG\DWG\DRW\1716_E-1-SECTION.dwg

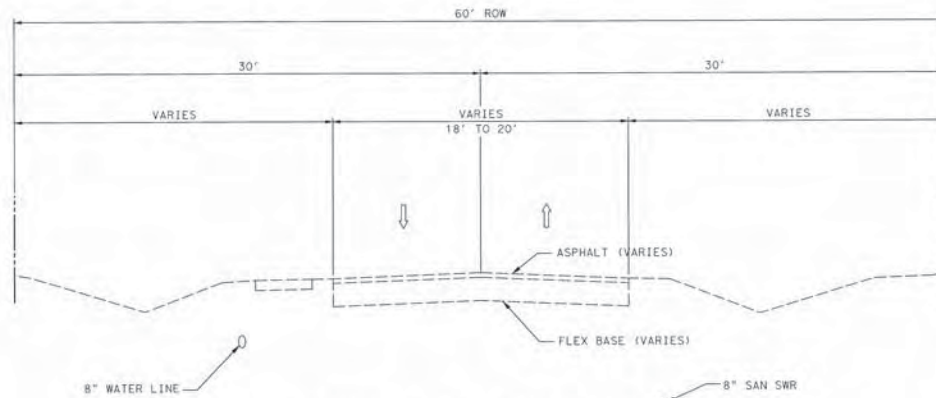
 <p>SDPS Houston Storm Drainage Program Support</p>	
 <p>PGAL TYPE REG. NO. T-2742 3131 BIRCHBARK, SUITE 200 HOUSTON, TEXAS 77042 PHONE (713) 625-1444 FAX (713) 988-9333</p>	 <p>CURTIS L. GRESHAM REGISTERED PROFESSIONAL ENGINEER NO. 10425</p>
<p>SURVEYED BY: LANDTECH PR. NO. P-5578</p>	
<p>CITY OF HOUSTON DEPARTMENT OF PUBLIC WORKS AND ENGINEERING GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING</p>	
<p>EXISTING TYPICAL SECTIONS SHEET 11 OF 12</p>	
<p>WBS NUMBER M-000285-0001-4</p>	 <p>55630</p>
<p>CITY OF HOUSTON PM JEFFREY T. HALL, P.E. SHEET NO. 32 OF 385</p>	

NOTES:





1. REFER TO BORING LOGS IN GEOTECHNICAL INVESTIGATION, REPORT NO. G13-211, DATED FEBRUARY 18, 2015, PREPARED BY ASSOCIATED TESTING LABORATORIES, INC., FOR MORE INFORMATION ON EXISTING PAVEMENT SECTIONS.



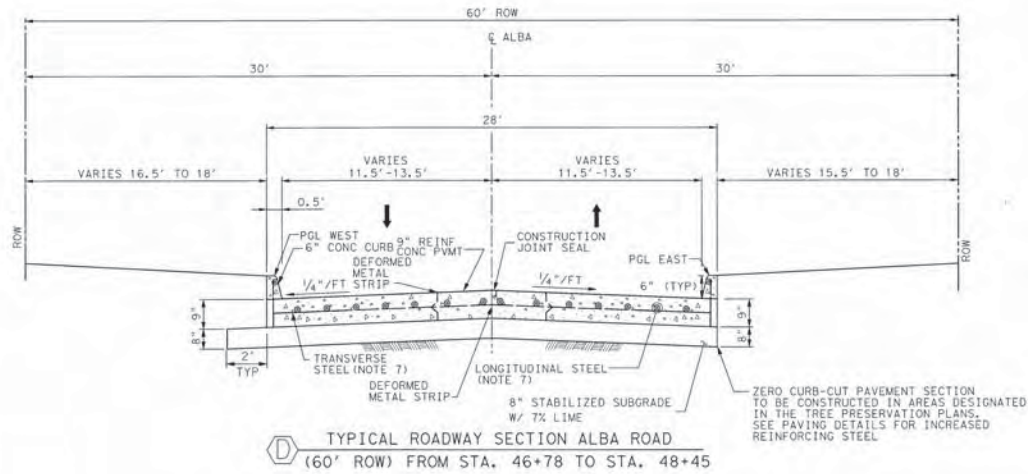
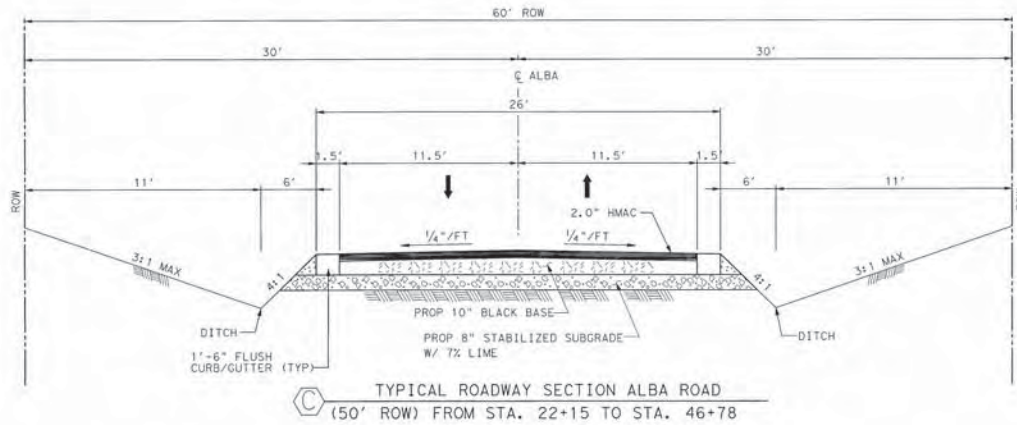
EXISTING TYPICAL SECTION JANISCH ROAD
(60' ROW) FROM STA. 10+00 TO STA. 11+26



EXISTING TYPICAL SECTION LEHMAN STREET
(60' ROW) FROM STA. 11+33 TO STA. 13+40

 <p>SDPS Houston Storm Drainage Program Support</p>	
 <p>PGAL 3131 BIRMPARK, SUITE 200 HOUSTON, TEXAS 77062 PHONE (713) 627-1444 FAX (713) 968-9333</p>	 <p>COSTAS L. GERBRANDT REGISTERED PROFESSIONAL ENGINEER NO. 7-5742 STATE OF TEXAS EXPIRES 12/31/2015</p>
<p>SURVEYED BY: LANDTECH PR NO. P-0576</p>	
<p>CITY OF HOUSTON DEPARTMENT OF PUBLIC WORKS AND ENGINEERING</p>	
<p>GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING</p>	
<p>EXISTING TYPICAL SECTIONS SHEET 12 OF 12</p>	
<p>WBS NUMBER M-000285-0001-4</p>	 <p>55630</p>
<p>DRAWING SCALE NTS</p>	
<p>CITY OF HOUSTON PM JEFFREY T. HALL, P.E.</p>	
<p>SHEET NO. 33 OF 385</p>	





DATE: 9/30/2005 6:57:04 AM
\\00000000\00000000\DWG\DWG\04\1719_E.J_SECTION12.dwg

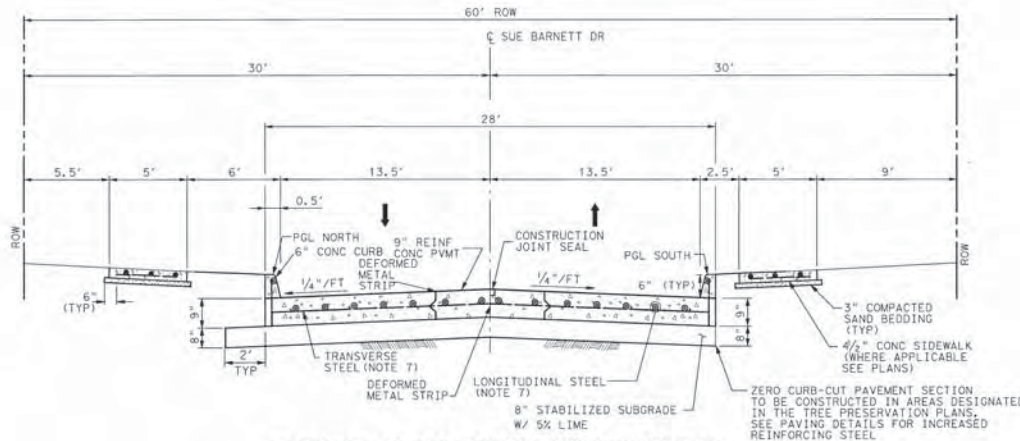


NOTES:

1. THE MAXIMUM WIDTH BETWEEN LONGITUDINAL JOINTS SHALL NOT EXCEED 15'-0".
2. ALL OPEN EARTHEN AREAS ARE TO USE OF SOD GRASS UNLESS SHOWN OTHERWISE ON THE DRAWINGS.
3. CONTRACTOR MAY SAW CUT IN LIEU OF DEFORMED METAL STRIP.
4. USE 1 FOOT STRIP OF SOD GRASS ALONG CURB AND ALONG ROW TO PREVENT EROSION UNTIL STAND OF GRASS IS ESTABLISHED.
5. SEE THE TREE PRESERVATION PLANTING AND PROTECTION PLANS FOR TREE REQUIREMENTS.
6. SEE COH DWG NO: 02751-01 - CONCRETE PAVEMENT DETAILS FOR LONGITUDINAL AND TRANSVERSE STEEL BAR SIZES.
7. PAVEMENT SUBGRADE IS RECOMMENDED BY GEOTECHNICAL INVESTIGATION REPORT (ATL REPORT NO. G13-211) PREPARED BY ASSOCIATED TESTING LABORATORIES, INC. FEBRUARY 18, 2015.

DATE: 01/06/2015 PUNJAB PN 10/02/2015 5:40:58 PM DRAWING: 1024-TYP-3-X-SECTION-02.dwg

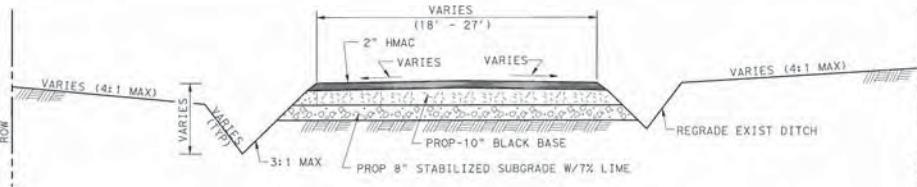
	
 <small>3131 BRAYFORD, SUITE 200 Houston, Texas 77042 Phone (713) 822-1444 Fax (713) 988-9333</small>	
CITY OF HOUSTON DEPARTMENT OF PUBLIC WORKS AND ENGINEERING	
GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING	
PROPOSED TYPICAL SECTIONS SHEET 2 OF 5	
<small>WBS NUMBER M-000285-0001-4</small>	
<small>DRAWING SCALE NTS</small>	
<small>CITY OF HOUSTON PM JEFFREY T. HALL, P.E.</small>	
<small>SHEET NO. 35 OF 385</small>	



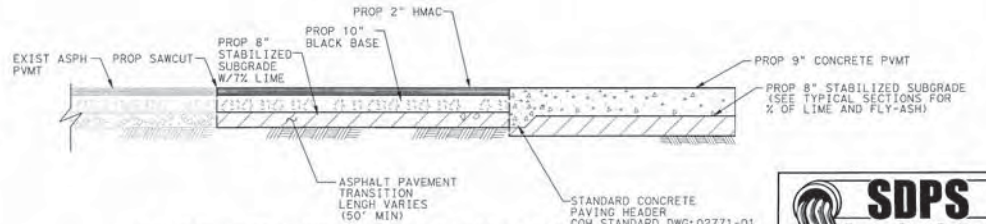
A TYPICAL ROADWAY SECTION SUE BARNETT DRIVE (60' ROW) FROM STA. 16+85 TO STA. 20+02

NOTES:

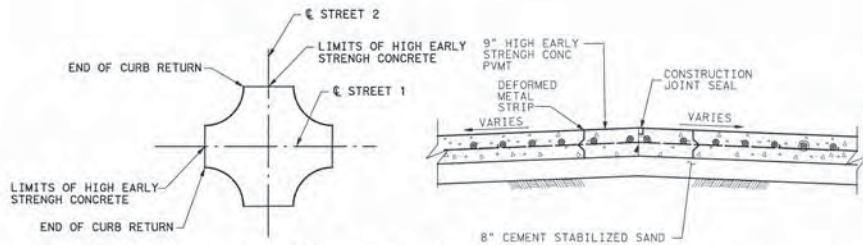
1. THE MAXIMUM WIDTH BETWEEN LONGITUDINAL JOINTS SHALL NOT EXCEED 15'-0".
2. ALL OPEN EARTHEN AREAS ARE TO USE OF SOD GRASS UNLESS SHOWN OTHERWISE ON THE DRAWINGS.
3. CONTRACTOR MAY SAW CUT IN LIEU OF DEFORMED METAL STRIP.
4. USE 1 FOOT STRIP OF SOD GRASS ALONG CURB AND ALONG ROW TO PREVENT EROSION UNTIL STAND OF GRASS IS ESTABLISHED.
5. SEE THE TREE PRESERVATION PLANTING AND PROTECTION PLANS FOR TREE REQUIREMENTS.
6. SEE COH DWG NO: 02751-01 - CONCRETE PAVEMENT DETAILS FOR LONGITUDINAL AND TRANSVERSE STEEL BAR SIZES.
7. PAVEMENT SUBGRADE IS RECOMMENDED BY GEOTECHNICAL INVESTIGATION REPORT (ATL REPORT NO. G13-211) PREPARED BY ASSOCIATED TESTING LABORATORIES, INC. FEBRUARY 18, 2015.



B FLEXIBLE BASE PAVEMENT - DITCH SECTION AT CROSS STREETS ASPHALT PAVEMENT TRANSITION

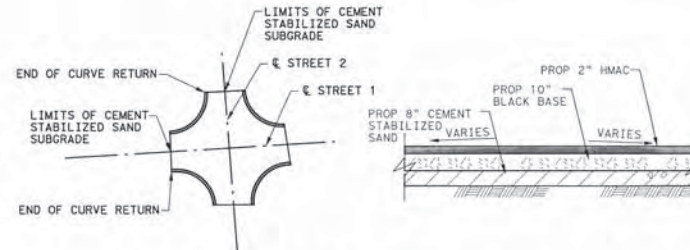


C PAVEMENT TRANSITION SECTION LONGITUDINAL SECTION



D TYPICAL ROADWAY CONCRETE SECTION AT INTERSECTIONS

- JUDIWAY ST AND ALBA RD
- WAKEFIELD DR. AND ALBA RD
- FISHER ST AND ALBA RD
- W 43RD ST AND ALBA RD
- CHAMBOARD LN AND ALBA
- CHAMBOARD AND DUNSMERE RD
- THORNTON RD AND BRINKMAN ST



E TYPICAL ROADWAY ASPHALT SECTION AT INTERSECTIONS

- W 41ST ST AND ALBA RD
- W 42ND ST AND ALBA RD
- LAMONTE LN AND ALBA RD
- AZALEA ST AND ALBA RD
- SUE BARNETT DR AND ALBA RD



CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

PROPOSED TYPICAL SECTIONS
SHEET 5 OF 5

WBS NUMBER
M-000285-0001-4
DRAWING SCALE
N.T.S.
CITY OF HOUSTON PM
JEFFREY T. HALL, P.E.
SHEET NO. 37A OF 385

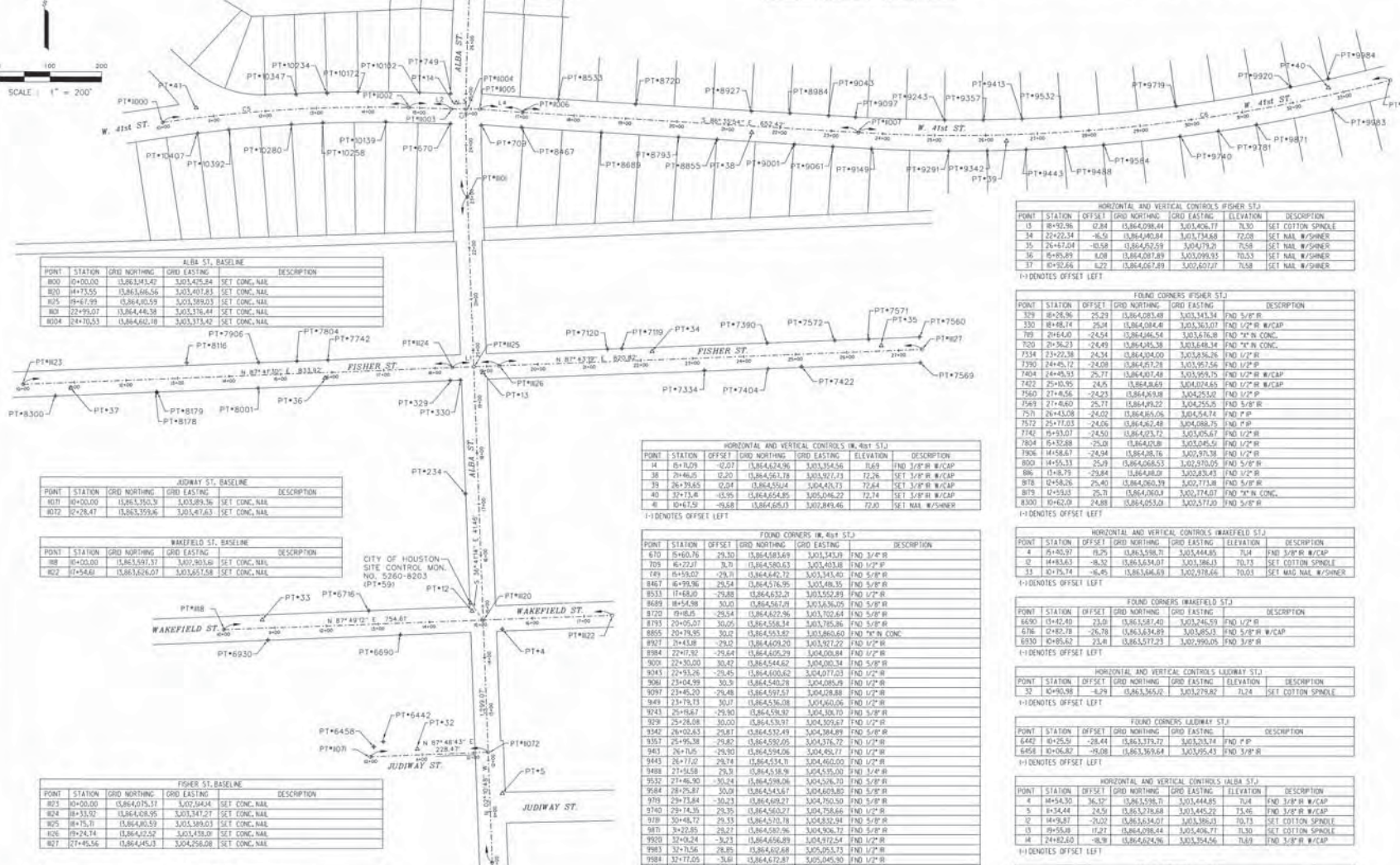




MATCH LINE STA 27+00

SURVEY BASELINE DATA		
Course	Bearing	Distance
L1	N 87°45'00" E	90.87
L2	S 89°02'22" E	82.53
L3	S 89°58'42" E	56.28
L4	S 89°42'22" E	82.53

SURVEY BASELINE CURVE DATA				
Curve	Radius	Length	Delta	Chord
C1	4,190.00'	851.13'	11°38'19"	N 03°38'22" E 849.67'
C2	2,715.00'	478.77'	10°03'58"	N 04°29'19" E 478.13'
C3	3,500.00'	1,041.48'	18°04'57"	N 84°21'58" E 1,032.17'



ALBA ST. BASELINE				
POINT	STATION	GRID NORTHING	GRID EASTING	DESCRIPTION
800	10+00.00	13,863,181.67	3,013,478.54	SET CONC. NAIL
800	10+17.55	13,863,181.56	3,013,407.81	SET CONC. NAIL
805	10+41.99	13,863,403.59	3,013,389.03	SET CONC. NAIL
806	10+72.90	13,863,446.38	3,013,316.44	SET CONC. NAIL
800A	10+105.5	13,863,652.18	3,013,313.42	SET CONC. NAIL

JUDWY ST. BASELINE				
POINT	STATION	GRID NORTHING	GRID EASTING	DESCRIPTION
807	10+00.00	13,863,150.9	3,013,895.36	SET CONC. NAIL
807B	10+26.47	13,863,359.56	3,013,874.63	SET CONC. NAIL

WAKEFIELD ST. BASELINE				
POINT	STATION	GRID NORTHING	GRID EASTING	DESCRIPTION
808	10+00.00	13,863,597.37	3,013,903.69	SET CONC. NAIL
807	10+94.60	13,863,626.07	3,013,657.58	SET CONC. NAIL

FISHER ST. BASELINE				
POINT	STATION	GRID NORTHING	GRID EASTING	DESCRIPTION
803	10+00.00	13,864,075.17	3,013,943.4	SET CONC. NAIL
804	10+33.92	13,864,028.95	3,013,847.27	SET CONC. NAIL
805	10+71.7	13,864,005.89	3,013,890.03	SET CONC. NAIL
806	10+92.74	13,864,232.52	3,013,810.07	SET CONC. NAIL
807	11+45.56	13,864,454.3	3,013,658.08	SET CONC. NAIL

W. 41st ST. BASELINE				
POINT	STATION	GRID NORTHING	GRID EASTING	DESCRIPTION
1000	10+00.00	13,864,538.40	3,012,785.03	SET CONC. NAIL
1001	10+24.41	13,864,538.40	3,012,785.03	SET CONC. NAIL
1002	10+49.82	13,864,612.26	3,013,344.55	SET CONC. NAIL
1003	10+74.3	13,864,612.26	3,013,344.55	SET CONC. NAIL
1004	10+99.25	13,864,612.26	3,013,344.55	SET CONC. NAIL
1005	11+24.13	13,864,612.26	3,013,344.55	SET CONC. NAIL
1006	11+49.08	13,864,612.26	3,013,344.55	SET CONC. NAIL
1007	11+74.03	13,864,612.26	3,013,344.55	SET CONC. NAIL
1008	12+00.00	13,864,612.26	3,013,344.55	SET CONC. NAIL

HORIZONTAL AND VERTICAL CONTROLS (W. 41st ST.)						
POINT	STATION	OFFSET	GRID NORTHING	GRID EASTING	ELEVATION	DESCRIPTION
11	8+10.0	-0.01	13,864,525.98	3,013,345.66	72.08	FINO 3/8" W/CAP
38	2+46.0	0.20	13,864,561.78	3,013,927.73	72.26	FINO 3/8" W/CAP
39	2+36.65	0.04	13,864,554.4	3,014,017.73	72.64	SET 3/8" W/CAP
40	3+71.8	-0.59	13,864,654.85	3,015,046.27	72.74	SET 3/8" W/CAP
41	1+41.5	-0.68	13,864,655.1	3,013,849.46	72.0	SET NAIL W/SHIMMER

FOUND CORNERS (W. 41st ST.)					
POINT	STATION	OFFSET	GRID NORTHING	GRID EASTING	DESCRIPTION
670	8+10.76	23.30	13,864,583.69	3,013,343.8	FINO 3/8" P
709	8+27.27	3.70	13,864,580.63	3,013,403.8	FINO 1/2" P
781	8+59.07	-29.10	13,864,642.72	3,013,316.60	FINO 5/8" P
847	8+198.86	29.54	13,864,518.95	3,013,81.9	FINO 3/8" P
853	1+48.0	-29.88	13,864,632.0	3,013,552.89	FINO 1/2" P
869	8+54.98	30.00	13,864,567.81	3,013,343.26	FINO 3/8" P
870	8+60.8	-29.54	13,864,627.96	3,013,322.84	FINO 5/8" P
873	2+45.07	30.05	13,864,558.34	3,013,268.86	FINO 3/8" P
885	2+19.95	30.02	13,864,553.87	3,013,860.60	FINO W/IN CONC
892	2+43.8	-29.02	13,864,629.20	3,013,927.22	FINO 1/2" P
894	2+47.92	-29.64	13,864,625.29	3,014,028.84	FINO 1/2" P
909	2+30.00	30.47	13,864,544.67	3,014,003.84	FINO 3/8" P
9043	2+53.26	-29.45	13,864,600.62	3,014,071.03	FINO 1/2" P
906	2+04.99	30.3	13,864,540.28	3,014,089.8	FINO 1/2" P
9097	2+45.20	-29.48	13,864,597.57	3,014,078.88	FINO 1/2" P
909	2+19.11	30.17	13,864,576.08	3,014,005.05	FINO 1/2" P
9243	2+06.47	-29.90	13,864,594.92	3,014,307.0	FINO 3/8" P
929	2+28.08	30.00	13,864,579.77	3,014,307.87	FINO 1/2" P
9347	2+02.83	30.81	13,864,572.49	3,014,284.69	FINO 1/2" P
9357	2+49.34	30.40	13,864,550.87	3,013,378.27	FINO 1/2" P
943	2+41.05	-29.90	13,864,594.06	3,014,491.77	FINO 1/2" P
9443	2+47.02	29.74	13,864,534.71	3,014,402.00	FINO 1/2" P
9488	2+45.08	29.76	13,864,538.98	3,014,250.29	FINO 1/2" P
9532	2+16.90	-30.24	13,864,598.06	3,014,236.70	FINO 3/8" P
9584	2+25.87	30.09	13,864,543.67	3,014,603.80	FINO 3/8" P
9719	2+13.84	-30.23	13,864,629.27	3,014,702.50	FINO 3/8" P
9740	2+14.28	29.76	13,864,569.27	3,014,284.69	FINO 1/2" P
978	3+04.72	30.13	13,864,570.78	3,014,023.88	FINO 3/8" P
9810	3+22.85	28.27	13,864,580.96	3,014,906.72	FINO 1/2" P
9920	3+04.24	-30.23	13,864,629.89	3,014,727.84	FINO 1/2" P
9983	3+12.56	-29.76	13,864,548.91	3,014,520.29	FINO 1/2" P
9984	3+17.25	-3.00	13,864,612.87	3,015,045.30	FINO 1/2" P
1002	4+08.94	-30.26	13,864,645.20	3,015,283.38	FINO 3/8" P
1009	4+14.27	28.79	13,864,587.75	3,015,217.44	FINO 1/2" P
1012	3+02.02	30.13	13,864,576.27	3,014,343.43	FINO 1/2" P
10234	3+02.09	-29.42	13,864,643.11	3,015,033.10	FINO 3/8" P
10258	3+01.93	29.73	13,864,585.75	3,015,036.46	FINO 1/2" P
10280	3+49.28	29.69	13,864,550.48	3,015,014.57	FINO 1/2" P
10347	3+44.66	29.73	13,864,544.91	3,015,014.59	FINO 3/8" P
10392	3+25.8	29.84	13,864,574.54	3,015,021.88	FINO 3/8" P
10407	3+44.03	30.00	13,864,565.4	3,015,292.1	FINO 3/8" P

HORIZONTAL AND VERTICAL CONTROLS (WAKEFIELD ST.)						
POINT	STATION	OFFSET	GRID NORTHING	GRID EASTING	ELEVATION	DESCRIPTION
4	10+40.97	0.25	13,863,598.71	3,014,448.8	72.04	FINO 3/8" W/CAP
10	10+83.63	-0.32	13,863,543.07	3,013,986.13	70.71	SET COTTON SPINDLE
11	10+75.14	-0.49	13,863,566.43	3,013,878.66	70.01	SET NAIL W/SHIMMER

FOUND CORNERS (WAKEFIELD ST.)					
POINT	STATION	OFFSET	GRID NORTHING	GRID EASTING	DESCRIPTION
6690	10+42.40	23.00	13,863,547.40	3,013,246.59	FINO 1/2" P
676	10+42.78	-26.78	13,863,634.89	3,013,853.43	FINO 5/8" W/CAP
6930	10+85.62	23.40	13,863,517.23	3,013,990.05	FINO 3/8" P

HORIZONTAL AND VERTICAL CONTROLS (LEWIS ST.)						
POINT	STATION	OFFSET	GRID NORTHING	GRID EASTING	ELEVATION	DESCRIPTION
32	10+00.00	0.26	13,863,365.42	3,013,279.82	72.4	SET COTTON SPINDLE

FOUND CORNERS (LEWIS ST.)					
POINT	STATION	OFFSET	GRID NORTHING	GRID EASTING	DESCRIPTION
6442	10+25.51	-28.44	13,863,373.27	3,013,333.14	FINO P/P
6454	10+06.82	-0.08	13,863,393.64	3,013,995.43	FINO 3/8" P

HORIZONTAL AND VERTICAL CONTROLS (ALBA ST.)						
POINT	STATION	OFFSET	GRID NORTHING	GRID EASTING	ELEVATION	DESCRIPTION
4	10+45.30	36.17	13,863,528.71	3,013,444.85	70.4	FINO 3/8" W/CAP
9	10+54.4	24.50	13,863,378.88	3,013,445.22	71.46	FINO 3/8" W/CAP
10	10+89.87	-30.02	13,863,543.07	3,013,986.03	70.71	SET COTTON SPINDLE
13	10+58.58	11.27	13,864,028.44	3,015,067.77	70.50	SET COTTON SPINDLE
14	2+42.610	-8.9	13,864,624.26	3,013,244.56	70.69	FINO 3/8" W/CAP

FOUND CORNERS (ALBA ST.)					
POINT	STATION	OFFSET	GRID NORTHING	GRID EASTING	DESCRIPTION
234	10+24.4	-29.43	13,863,883.38	3,013,343.38	FINO 1/2" P
329	10+42.64	-46.60	13,864,028.48	3,013,343.34	FINO 3/8" W/CAP
330	10+42.64	-26.54	13,864,028.4	3,013,363.07	FINO 1/2" W/CAP
610	2+44.56	-30.25	13,864,583.69	3,013,343.9	FINO 3/8" P
709	2+14.23	29.73	13,864,580.63	3,014,018.8	FINO 1/2" P
709	2+00.17	30.03	13,864,642.72	3,013,343.40	FINO 3/8" P

HORIZONTAL AND VERTICAL CONTROLS (FISHER ST.)						
POINT	STATION	OFFSET	GRID NORTHING	GRID EASTING	ELEVATION	DESCRIPTION
13	10+92.86	0.21	13,864,028.44	3,013,406.77	70.50	SET COTTON SPINDLE
34	2+22.34	-6.50	13,864,403.84	3,013,348.88	72.08	SET NAIL W/SHIMMER
35	2+47.04	-0.58	13,864,525.9	3,014,079.20	70.58	SET NAIL W/SHIMMER
36	10+85.89	4.08	13,864,028.89	3,013,995.93	70.53	SET NAIL W/SHIMMER
37	10+92.86	0.27	13,864,028.89	3,013,607.07	70.68	SET NAIL W/SHIMMER

FOUND CORNERS (FISHER ST.)					
POINT	STATION	OFFSET	GRID NORTHING	GRID EASTING	DESCRIPTION
329	10+26.96	25.23	13,864,028.48	3,013,343.34	FINO 5/8" P
330	10+48.14	26.94	13,864,028.4	3,013,363.07	FINO 1/2" W/CAP
709	2+44.60	-0.54	13,864,406.54	3,013,676.8	FINO W/IN CONC
709	2+36.23	-0.49	13,864,405.38	3,013,448.14	FINO W/IN CONC
734	2+22.38	24.34	13,864,040.00	3,013,956.26	FINO 1/2" P
739	2+44.52	-24.09	13,864,617.21	3,013,957.56	FINO 1/2" P
764	10+48.51	25.71	13,864,017.48	3,013,995.75	FINO 1/2" W/CAP
762	2+10.95	24.9	13,864,848.9	3,014,014.85	FINO 1/2" W/CAP
7640	2+14.56	-24.23	13,864,638.8	3,014,251.02	FINO 1/2" P
7649	2+16.60	25.71	13,864,619.22	3,014,255.55	FINO 5/8" P
750	2+43.28	-24.02	13,864,658.06	3,014,541.74	FINO P/P
757					

MATCH LINE STA 40+00



MATCH LINE STA 23+00

SURVEY BASELINE CURVE DATA

Curve	Radius	Length	Delta	Chord
C3	3,451.19'	235.70'	03°54'51"	N 04°30'33" W 235.71'
C4	3,390.93'	261.30'	04°29'00"	N 04°21'28" W 261.33'

SURVEY BASELINE DATA

Course	Bearing	Distance
L10	S 87°56'17" W	85.87'
L11	S 88°13'51" W	208.16'

MARTIN AVE. BASELINE

POINT	STATION	GRID NORTHING	GRID EASTING	DESCRIPTION
	0+00.00	13,868,435.48	3,045,530.00	SET CONC. NAIL
	0+71.34	13,868,404.66	3,025,307.79	SET CONC. NAIL

OAK AVE. BASELINE

POINT	STATION	GRID NORTHING	GRID EASTING	DESCRIPTION
	0+00.00	13,868,786.8	3,024,571.74	SET CONC. NAIL
	0+77.32	13,868,802.41	3,025,291.71	SET CONC. NAIL

CANDLELIGHT LANE BASELINE

POINT	STATION	GRID NORTHING	GRID EASTING	DESCRIPTION
	0+00.00	13,869,076.4	3,024,504.88	FIND MAG. NAIL
	0+85.87	13,869,223.32	3,024,493.07	SET CONC. NAIL
	0+94.04	13,869,48.87	3,024,204	SET "X" N CONC.

JANISCH RD. BASELINE

POINT	STATION	GRID NORTHING	GRID EASTING	DESCRIPTION
	0+00.00	13,869,624.94	3,024,467.40	SET CONC. NAIL
	0+42.25	13,869,595.81	3,024,100.50	SET CONC. NAIL

H.C.F.C.D. BASELINE

POINT	STATION	GRID NORTHING	GRID EASTING	DESCRIPTION
	0+00.00	13,869,624.94	3,024,466.76	SET NAIL
	27+03.27	13,869,684.71	3,026,817.79	SET NAIL
	28+27.40	13,869,626.29	3,026,296.37	SET NAIL

BRINKMAN ST. BASELINE

POINT	STATION	GRID NORTHING	GRID EASTING	DESCRIPTION
	25+77.39	13,868,435.46	3,045,330.00	SET CONC. NAIL
	29+29.00	13,868,786.8	3,024,571.74	SET CONC. NAIL
	32+43.52	13,869,076.4	3,024,504.88	FIND MAG. NAIL
	34+92.25	13,869,344.29	3,024,481.40	SET CONC. NAIL
	37+48.13	13,869,624.94	3,024,466.76	SET NAIL
	39+05.02	13,869,902.75	3,024,455.25	SET CONC. NAIL
	37+46.52	13,869,423.71	3,024,466.09	SET CONC. NAIL
	38+07.00	13,869,753.6	3,024,466.8	SET CONC. NAIL

FOUND CORNERS H.C.F.C.D.

POINT	STATION	OFFSET	GRID NORTHING	GRID EASTING	ELEVATION	DESCRIPTION
	23076	8+74.07	-7.50	13,869,624.98	3,025,329.49	FIND 1/2" IR
	2308	27+03.63	-6.83	13,869,702.54	3,026,817.56	FIND 3/8" IR W/CAP
	23208	28+02.82	6.14	13,869,627.66	3,026,288.25	FIND 3/8" IR

HORIZONTAL AND VERTICAL CONTROLS (H.C.F.C.D.)

POINT	STATION	OFFSET	GRID NORTHING	GRID EASTING	ELEVATION	DESCRIPTION
	52	1+91.59	3.39	13,869,624.86	3,024,963.82	74.77 SET 3/8" IR W/CAP
	53	8+95.6	-0.69	13,869,647.55	3,025,302.75	70.86 SET 3/8" IR W/CAP
	54	27+26.76	3.63	13,869,685.29	3,025,786.57	70.02 SET 3/8" IR W/CAP
	55	27+53.48	-7.82	13,869,694.88	3,026,217.73	74.57 FIND "X" N CONC.
	57	24+46.85	-9.48	13,869,684.05	3,025,959.34	71.48 SET 600 NAIL

FOUND CORNERS JANISCH SJ

POINT	STATION	OFFSET	GRID NORTHING	GRID EASTING	ELEVATION	DESCRIPTION
	392	0+25.53	30.02	13,869,375.36	3,024,520.33	FIND 3/8" IR
	22582	1+05.52	28.01	13,869,323.83	3,024,528.80	FIND 3/8" IR

HORIZONTAL AND VERTICAL CONTROLS (JANISCH SJ)

POINT	STATION	OFFSET	GRID NORTHING	GRID EASTING	ELEVATION	DESCRIPTION
	29	0+43.57	-8.44	13,869,363.07	3,024,500.48	76.98 SET COTTON SPINDLE

FOUND CORNERS (CANDLELIGHT LANE)

POINT	STATION	OFFSET	GRID NORTHING	GRID EASTING	ELEVATION	DESCRIPTION
	22525	0+46.35	29.76	13,869,491.03	3,024,287.75	FIND 1/2" IR

HORIZONTAL AND VERTICAL CONTROLS (CANDLELIGHT LANE)

POINT	STATION	OFFSET	GRID NORTHING	GRID EASTING	ELEVATION	DESCRIPTION
	78	0+48.59	-23.74	13,869,024.03	3,024,481.09	76.09 SET COTTON SPINDLE

FOUND CORNERS (OAK AVE.)

POINT	STATION	OFFSET	GRID NORTHING	GRID EASTING	ELEVATION	DESCRIPTION
	4783	0+30.08	-9.92	13,869,806.69	3,024,547.23	FIND 600 NAIL N CONC.

FOUND CORNERS (BRINKMAN ST.)

POINT	STATION	OFFSET	GRID NORTHING	GRID EASTING	ELEVATION	DESCRIPTION
	4353	23+42.06	28.84	13,868,200.96	3,024,568.72	FIND 1/2" IR
	4657	26+09.00	-28.83	13,868,555.29	3,024,497.62	FIND 3/8" IR
	4783	29+49.28	30.24	13,869,806.69	3,024,547.23	FIND 600 NAIL N CONC.
	5045	32+36.73	30.24	13,869,076.79	3,024,536.25	FIND 1/2" IR
	550	34+60.04	29.68	13,869,893.36	3,024,520.33	FIND 3/8" IR

HORIZONTAL AND VERTICAL CONTROLS (BRINKMAN ST.)

POINT	STATION	OFFSET	GRID NORTHING	GRID EASTING	ELEVATION	DESCRIPTION
	26	25+76.85	-23.06	13,868,435.45	3,024,528.00	76.84 SET 3/8" IR W/CAP
	27	29+29.28	-29.3	13,868,786.8	3,024,492.64	75.47 SET 3/8" IR W/CAP
	28	32+47.82	-86.63	13,869,076.03	3,024,481.09	76.09 SET COTTON SPINDLE
	29	35+05.05	14.67	13,869,363.07	3,024,500.48	76.98 SET COTTON SPINDLE
	51	37+46.17	-12.71	13,869,686.42	3,024,453.57	78.28 SET COTTON SPINDLE



No.	Size	Revisions	DATE

NOTES:
 1. ALL COORDINATES AND BEARINGS SHOWN HEREIN ARE REFERENCED TO THE TEXAS COORDINATE SYSTEM, SOUTH CENTRAL ZONE, 1983, NORTH AMERICAN DATUM OF 1983/CORS (DORADU 2000 EPOCH DATE). ALL COORDINATES ARE GRID VALUES AND CAN BE CONVERTED TO SURFACE BY DIVIDING BY THE COMBINED SCALE FACTOR OF 0.9999985.
 2. ALL ELEVATIONS SHOWN HEREIN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 HAVD 88V/CORS (DORADU 2000 EPOCH DATE/GEODAL).
 3. TO CONVERT FROM NAVD83/CORS (DORADU 2000 EPOCH DATE/GEODAL) TO FEMA DATUM (NAVD83/2000 ADU), ADD 5.00 FEET (PROJECT DATUM = 5.00 FEET + FEMA DATUM BASED ON THE TEXAS COUNTY FLOODPLAIN REFERENCE MARK (DORADU 2000 ADU)).
 4. THIS IS NOT A BOUNDARY SURVEY.

PROJECT BENCHMARK DATA:
 CITY OF HOUSTON MONUMENT NO. 5260-8208, A TYPE 4A MARK LOCATED ON THE NORTHEAST CORNER OF ALBA ROAD AND SUE BARRETT DRIVE, ELEVATION = 74.48' (NAVD83/CORS 2011 ADU)



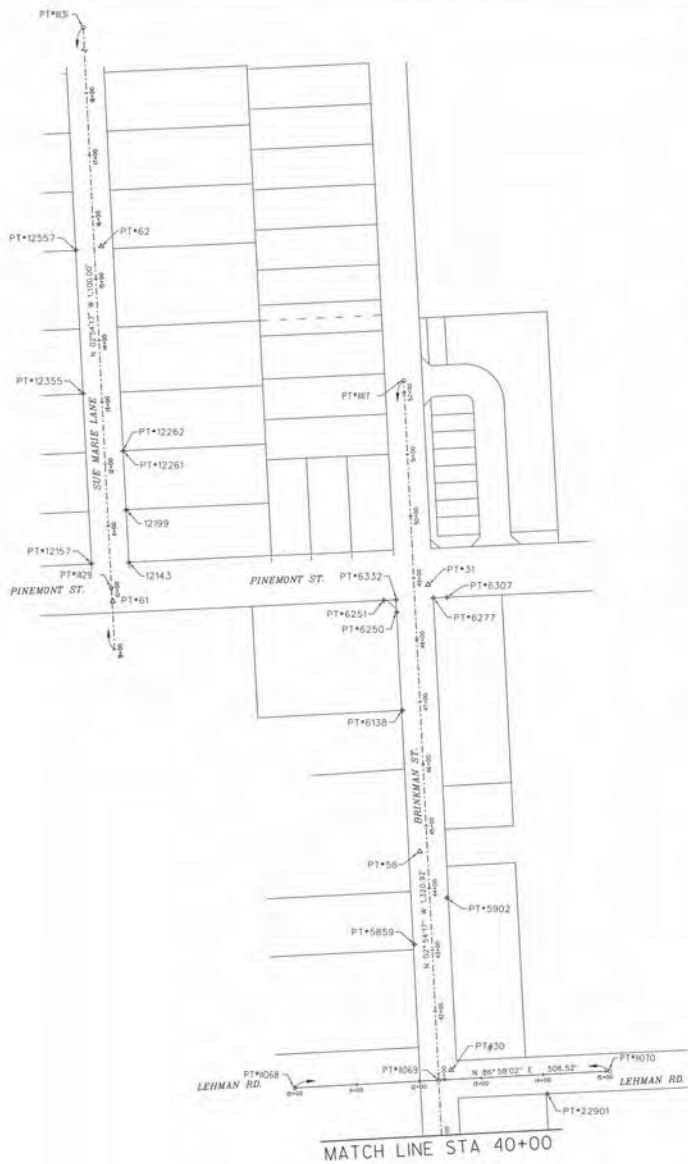
CONSULTANT: LANDRETH CONSULTANTS, INC. (Logo)
 2008 North Loop West, Suite 1000, Houston, Texas 77008
 TEL: 713.866.8800
 SEAL: RUSSELL HENDERSON, P.E. (Signature)
 TPLS REG. NO. 000900
 DATE: 03/02/2015

PGAL (Logo)
 3133 BRUNNEN, SUITE 200, Houston, Texas 77022
 Phone: (713) 622-1444
 Fax: (713) 968-9333

CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
 GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING
 SURVEY CONTROL MAP

WBS NUMBER: M-000285-000-4
 DRAWING SCALE: P=200'
 CITY OF HOUSTON, PM: JEFFREY T. HALL, P.E.
 SHEET NO. 48 OF 385
 FOR CITY OF HOUSTON USE ONLY (Stamp with 55630)

DATE: 03/02/2015
 BY: [Signature]
 PLOT: [Signature]



HORIZONTAL AND VERTICAL CONTROLS (SUE MARIE LANE)

POINT	STATION	OFFSET	GRID NORTHING	GRID EASTING	ELEVATION	DESCRIPTION
61	3+78.71	L/S	13,870,765.76	3,003,907.93	76.17	SET 5/8" R W/CAP
62	15+52.3	R/O	13,871,293.35	3,003,208.22	76.29	SET 5/8" R W/CAP

I-I DENOTES OFFSET LEFT

FOUND CORNERS (SUE MARIE LANE)

POINT	STATION	OFFSET	GRID NORTHING	GRID EASTING	DESCRIPTION
1049	0+39.66	30.08	13,870,778.59	3,003,953.17	FND 1/2" R W/CAP
1057	0+46.0	30.00	13,870,776.50	3,003,933.00	FND 1/2" R
1059	0+46.46	30.03	13,870,780.78	3,003,948.93	FND 1/2" R W/CAP
1070	0+49.67	30.17	13,870,958.30	3,003,944.14	FND 1/2" R
1072	0+49.74	30.02	13,870,958.42	3,003,944.00	FND 1/2" R W/CAP
1085	15+52.85	-29.68	13,871,021.36	3,003,979.53	FND 1/2" R
1092	15+52.78	-29.63	13,871,020.70	3,003,947.87	FND 1/2" R

I-I DENOTES OFFSET LEFT

HORIZONTAL AND VERTICAL CONTROLS (LEHMAN RD)

POINT	STATION	OFFSET	GRID NORTHING	GRID EASTING	ELEVATION	DESCRIPTION
30	0+52.42	-6.02	13,869,260.29	3,004,475.43	76.67	SET COTTON SPINDLE

I-I DENOTES OFFSET LEFT

FOUND CORNERS (LEHMAN RD)

POINT	STATION	OFFSET	GRID NORTHING	GRID EASTING	DESCRIPTION
2290	14+04.78	36.0	13,869,922.09	3,004,626.02	FND 1/2" R

I-I DENOTES OFFSET LEFT

FOUND CORNERS (BRINKMAN ST)

POINT	STATION	OFFSET	GRID NORTHING	GRID EASTING	DESCRIPTION
5859	43+09.28	-24.23	13,870,865.06	3,004,402.09	FND 3/4" R
5902	43+42.68	-21.98	13,870,823.50	3,004,464.54	FND 1/2" R W/CAP
6108	46+88.33	-28.80	13,870,540.84	3,004,392.36	FND 1/2" R
6250	48+46.38	-29.86	13,870,688.62	3,004,383.29	FND 5/8" R W/CAP
629	48+46.47	-30.04	13,870,717.66	3,004,362.22	FND 5/8" R W/CAP
6277	48+46.07	30.03	13,870,723.36	3,004,407.48	FND 1/2" R
6307	48+46.99	51.99	13,870,722.54	3,004,464.03	FND 5/8" R W/CAP
6332	48+46.4	-30.00	13,870,788.61	3,004,382.14	FND 1/2" R

I-I DENOTES OFFSET LEFT

HORIZONTAL AND VERTICAL CONTROLS (BRINKMAN ST)

POINT	STATION	OFFSET	GRID NORTHING	GRID EASTING	ELEVATION	DESCRIPTION
30	4+04.43	20.76	13,869,260.29	3,004,475.43	76.67	SET COTTON SPINDLE
31	48+88.26	22.41	13,870,743.08	3,004,433.43	76.40	SET COTTON SPINDLE
56	44+56.67	-10.25	13,870,553.14	3,004,420.41	75.53	SET 3/4" R

I-I DENOTES OFFSET LEFT

LEHMAN RD BASELINE

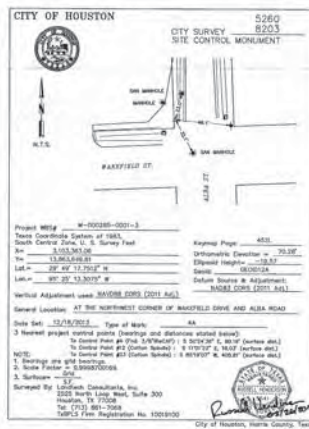
POINT	STATION	GRID NORTHING	GRID EASTING	DESCRIPTION
1068	0+00.00	13,869,929.93	3,004,200.20	SET CONC. NAL
1069	0+36.62	13,869,944.19	3,004,456.47	SET CONC. NAL
1070	0+68.52	13,869,958.73	3,004,755.95	SET CONC. NAL

BRINKMAN ST BASELINE

POINT	STATION	GRID NORTHING	GRID EASTING	DESCRIPTION
1069	40+83.57	13,869,944.19	3,004,456.47	SET CONC. NAL
107	52+48.99	13,870,127.20	3,004,994.23	SET CONC. NAL

SUE MARIE LANE BASELINE

POINT	STATION	GRID NORTHING	GRID EASTING	DESCRIPTION
829	0+00.00	13,870,737.46	3,003,929.34	SET CONC. NAL
103	20+00.00	13,872,593.37	3,004,277.98	SET "X" IN CONC.



City of Houston, Storm Control Team

City of Houston, Storm Control Team

No.	Date	Revisions	By

- NOTES:
- ALL COORDINATES AND BEARINGS SHOWN HEREIN ARE REFERENCED TO THE TEXAS COORDINATE SYSTEM SOUTH CENTRAL ZONE (NAD83/2011 ADJUSTED) AND 0.02 FEET. PROJECT DATUM = 1985 DATUM. ALL COORDINATES ARE GRID VALUES AND CAN BE CONVERTED TO SURFACE BY DIVIDING BY THE COMBINED SCALE FACTOR OF 0.9999984.
 - ALL ELEVATIONS SHOWN HEREIN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD83). USE ADJUSTED EPOCH DATE/COORD.
 - TO CONVERT FROM NAVD83/CORS (CON ADJ) 2000 EPOCH DATE/COORD. TO FEMA DATUM (NAVD83/2000 ADJ), ADD 0.02 FEET. PROJECT DATUM = 1985 DATUM. ALL COORDINATES ARE GRID VALUES AND CAN BE CONVERTED TO SURFACE BY DIVIDING BY THE COMBINED SCALE FACTOR OF 0.9999984.
 - THIS IS NOT A BOUNDARY SURVEY.

PROJECT BENCHMARK DATA:
 CITY OF HOUSTON MONUMENT NO. 5260-8208, A TYPE 4A MARK LOCATED ON THE NORTHEAST CORNER OF ALZA ROAD AND SUE BARNETT DRIVE, ELEVATION = 74.48' (NAVD83/CORS 2011 ADJ).



CONSULTANTS:

LANDTECH CONSULTANTS, INC.
 One Regency Lane West
 2508 South Loop West
 Houston, Texas 77058
 Tel: 713-866-7000

SEAL: RUSSELL HENDERSON
 05/02/2015

TBPLS REG. NO. 000900

PGAL
 3131 BRANKMAN, SUITE 300
 HOUSTON, TEXAS 77024
 Phone: (713) 622-1444
 Fax: (713) 666-3333

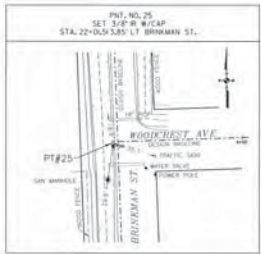
CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

SURVEY CONTROL MAP

MIS NUMBER: M-00085-000-4
 DRAWING SCALE: 7:200
 CITY OF HOUSTON PW
 JEFFREY T. HALL, P.E.
 SHEET NO. 42 OF 385

DATE: 05/02/2015
 FILE: 55630



No.	Date	Revision	By

NOTES:
1. ALL COORDINATES AND BEARINGS SHOWN HEREON ARE REFERENCED TO THE TEXAS COORDINATE SYSTEM, SOUTH CENTRAL ZONE, NATIONAL NORTH AMERICAN DATUM OF 1983 (NAD83) (2011 ADJUSTED EPOCH DATE). ALL COORDINATES ARE GRID VALUES AND CAN BE CONVERTED TO SURFACE BY DIVIDING BY THE COMBINED SCALE FACTOR OF 0.9999985.
2. ALL ELEVATIONS SHOWN HEREON ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD83) (2011 ADJUSTED EPOCH DATE/GEODETIC).
3. TO CONVERT FROM NAVD83/CORS (2011 ADJUSTED EPOCH DATE/GEODETIC) TO FEMA DATUM (NAVD83/2004 ADJUSTED) ADD 0.02 FEET. PROJECT DATUM = 0.00 FEET = FEMA DATUM BASED ON THE 1985 HARRIS COUNTY FLOODPLAIN REFERENCE MARK (04070) ON 8/10/94.
4. THIS IS NOT A BOUNDARY SURVEY.

PROJECT BENCHMARK DATA:
CITY OF HOUSTON MONUMENT NO. 5260-8208, A TYPE 4A MARK LOCATED ON THE NORTHEAST CORNER OF ALBA ROAD AND SUE BARNETT DRIVE, ELEVATION + 74.48' (NAVD83/CORS 2011 ADJUSTED).



CONSULTANT:
LANDPOINT CONSULTANTS, INC.
4508 North Loop West
Houston, Texas 77008
TEL: 281-461-1100
TFLS REG. NO. 000900

SEAL:
RUSSELL HENDERSON
560
05/10/2015

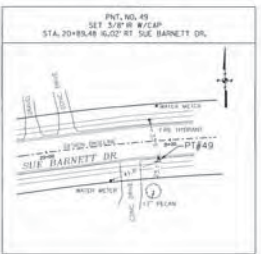
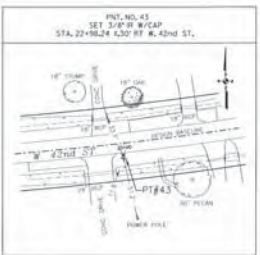
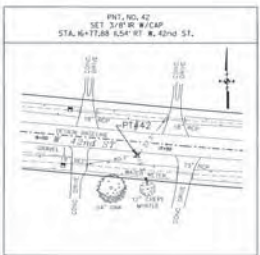
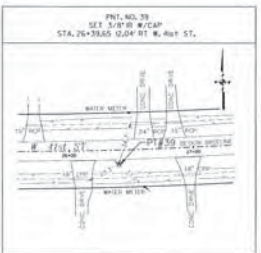
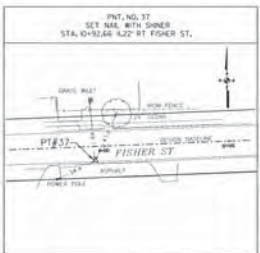
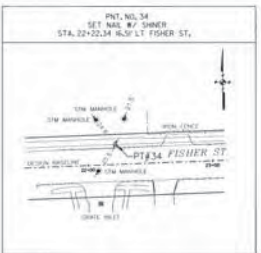
PGAL
PNT. NO. 29
3131 BRINKMAN, SUITE 300
Houston, Texas 77002
Phone: (713) 622-1444
Fax: (713) 668-4353

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING
SURVEY SWING TIES

ISS NUMBER
M-000285-000-4
DRAWING SCALE
P=50'
CITY OF HOUSTON PW
JEFFREY T. HALL, P.E.
SHEET NO. 43 OF 385

FOR CITY OF HOUSTON
USE ONE:
55630

DATE: 05/11/15
BY: JTH



No.	Eq'ty	Revisions	DATE

NOTES:
1. ALL COORDINATES AND BEARINGS SHOWN HEREON ARE REFERENCED TO THE TEXAS COORDINATE SYSTEM, SOUTH CENTRAL ZONE, 1928, NORTH AMERICAN DATUM OF 1983. COORDINATE 2000 EPOCH DATE. ALL COORDINATES ARE GRID VALUES AND CAN BE CONVERTED TO SURFACE BY DIVIDING BY THE COMBINED SCALE FACTOR OF 0.99970005.
2. ALL ELEVATIONS SHOWN HEREON ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988. NAVD83 COORDINATE 2000 EPOCH DATE/GEODAD.
3. TO CONVERT FROM NAVD83 COORDINATE 2000 EPOCH DATE/GEODAD TO TEMA DATUM (NAVD83/2000) ADD 0.02 FEET. PROJECT DATUM + 0.02 FEET 1 YEAR DATUM BASED ON THE 10 TO HARRIS COUNTY FLOODPLAIN REFERENCE MARK 030275 ON 6/20/14.
4. THIS IS NOT A BOUNDARY SURVEY.

PROJECT BENCHMARK DATA:
CITY OF HOUSTON MONUMENT NO. 5260-8208, A TYPE 44 MARK LOCATED ON THE NORTHEAST CORNER OF ALBA ROAD AND SUE BARNETT DRIVE. ELEVATION = 74.48' (NAVD83/COORS 2000)



CONSULTANT:
LANDTECH CONSULTANTS, INC.
2001 Regentway - 1st Floor
2008 North Loop West
Houston, Texas 77008
TEL: 713.865.0000

SEAL:
RUSSELL HENDERSON
568
03/02/2015

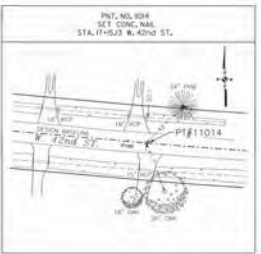
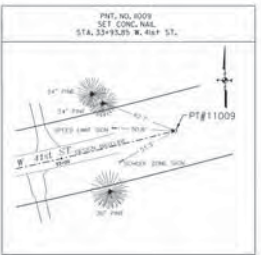
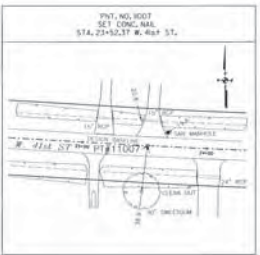
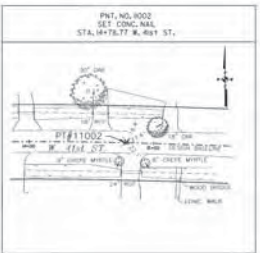
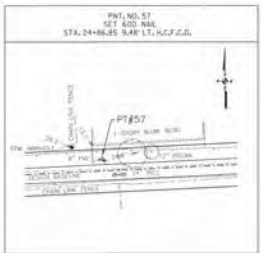
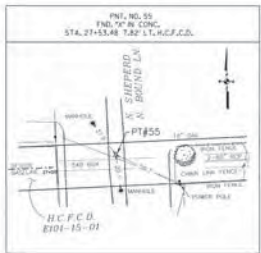
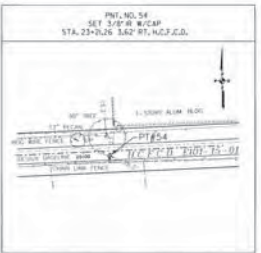
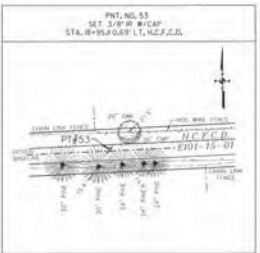
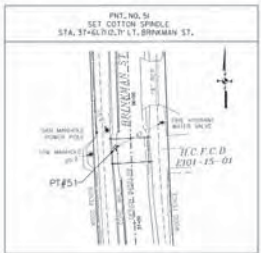
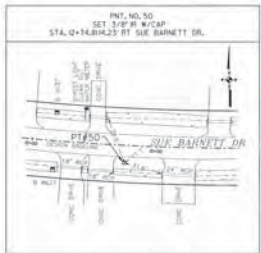
PGAL
2015 952
3131 BRANSPARK, SUITE 200
Houston, Texas 77022
Phone: (713) 622-1444
Fax: (713) 968-8333

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING
SURVEY SWING TIES

WBS NUMBER
M-000285-000-4
DRAWING SCALE
P=50'
CITY OF HOUSTON PW
JEFFREY T. HALL, P.E.
SHEET NO. 44 OF 385

FOR CITY OF HOUSTON
USE ONLY
55630

DATE: 02/12/2015
BY: JTH



NO.	DATE	REVISIONS	DATE

NOTES

1. ALL COORDINATES AND BEARINGS SHOWN HEREON ARE REFERENCED TO THE TEXAS COORDINATE SYSTEM SOUTH CENTRAL ZONE (NAD83), NORTH AMERICAN DATUM OF 1983 (CORS 10004), NORTH AMERICAN DATUM OF 1983 (CORS 10040) 2000 EPOCH DATE. ALL COORDINATES ARE GRID VALUES AND CAN BE CONVERTED TO SURFACE BY DIVIDING BY THE COMBINED SCALE FACTOR OF 0.99999004.
2. ALL ELEVATIONS SHOWN HEREON ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD83) (CORS 10040) 2000 EPOCH DATE (GEOID04).
3. TO CONVERT FROM NAVD83/CORS 10040) 2000 EPOCH DATE/GEOID04 TO FEMA DATUM (NAVD83/2004) ADD 0.02 FEET. PROJECT DATUM = GDD FEET + FEMA DATUM BASED ON THE 10 HARRIS COUNTY FLOODPLAIN REFERENCE MARK 00020 ON 6/10/04.
4. THIS IS NOT A BOUNDARY SURVEY.

PROJECT BENCHMARK DATA:
CITY OF HOUSTON MONUMENT NO. 5260-8206,
A TYPE 4A MARK LOCATED ON THE NORTHEAST CORNER OF ALBA ROAD AND SUE BARNETT DRIVE (ELEVATION = 74.48' (NAVD83/CORS 2011 ADJ.))



CONSULTANT:

LC

LANDTECH CONSULTANTS, INC.
1000 West Loop West
Suite 500
Houston, Texas 77028
Tel: 281.461.1100
TIPES REG. NO. 630900

SEAL

RUSSELL HENDERSON
Professional Engineer
No. 9648
03/02/2015

PGAL

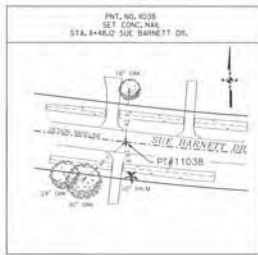
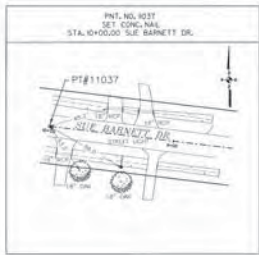
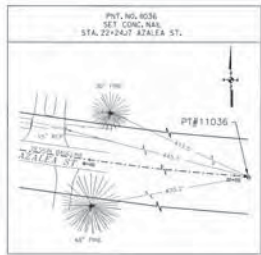
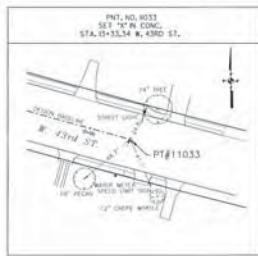
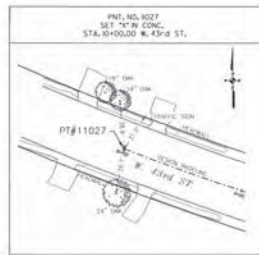
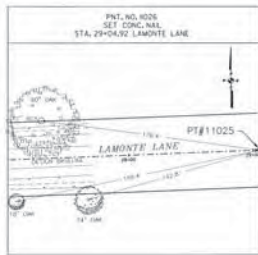
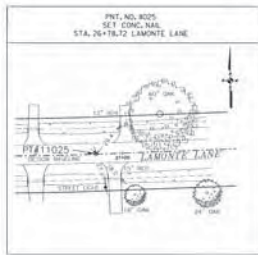
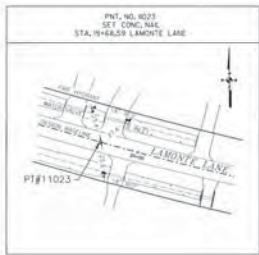
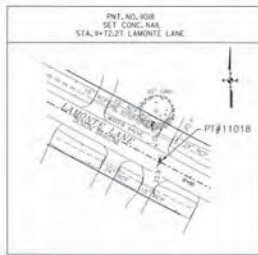
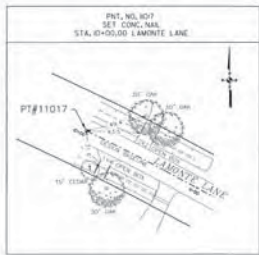
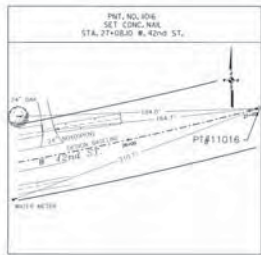
1315 BRANNAN, SUITE 200
HOUSTON, TEXAS 77022
Phone: (713) 622-1444
Fax: (713) 668-9333

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

SURVEY SWING TIES

WDS NUMBER M 000285-000-4	FOR CITY OF HOUSTON USE ONLY
DRAWING SCALE 1"=50'	55630
CITY OF HOUSTON PW JEFFREY T. HALL, P.E.	
SHEET NO. 45 OF 385	



No.	DATE	REVISION	BY

NOTES:
 1. ALL COORDINATES AND BEARINGS SHOWN HEREON ARE REFERENCED TO THE TEXAS COORDINATE SYSTEM, SOUTH-CENTRAL ZONE, NORTH AMERICAN DATUM OF 1983, CORRS (DOWAD) 2000 EPOCH DATE. ALL COORDINATES ARE GRID VALUES AND CAN BE CONVERTED TO SURFACE BY DIVIDING BY THE COMBINED SCALE FACTOR OF 0.99999996.
 2. ALL ELEVATIONS SHOWN HEREON ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD83) CORRS (DOWAD) 2000 EPOCH DATE/GEOD02A.
 3. TO CONVERT FROM NAVD83 CORRS (DOWAD) 2000 EPOCH DATE/GEOD02A TO FEMA DATUM (NAVD83/2000AD) ADD 0.02 FEET. PROJECT DATUM = 0.00 FEET + FEMA DATUM BASED ON THE 1988 HARRIS COUNTY FLOODPLAIN REFERENCE MARK (DOWAD) OR 6.00/PA.
 4. THIS IS NOT A BOUNDARY SURVEY.

PROJECT BENCHMARK DATA:
 CITY OF HOUSTON MONUMENT NO. 5260-8208, A TYPE 4A MARK LOCATED ON THE NORTHEAST CORNER OF ALBA ROAD AND SUE BARNETT DRIVE, ELEVATION = +74.48' (NAVD83/CORRS 2000AD).



CONSULTANT:
 LANDMARK CONSULTANTS, INC.
 4000 West Loop South
 Houston, Texas 77008
 TRPLS REG. NO. 000900

SEAL:

 RUSSELL HENDERSON
 566
 03/02/2015

PGAL
 3131 BRIMMARSH, SUITE 200
 HOUSTON, TEXAS 77022
 PHONE (713) 822-1444
 FAX (713) 956-9333

CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

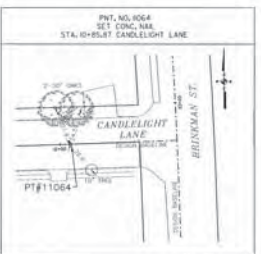
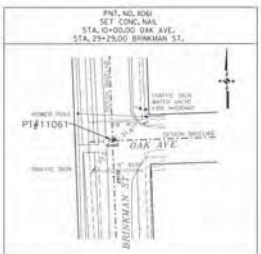
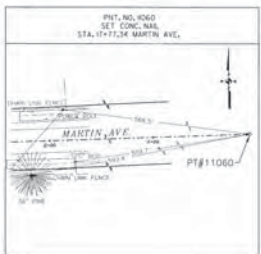
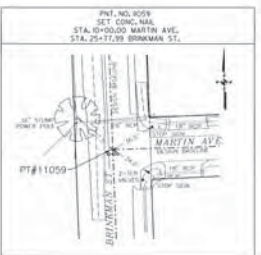
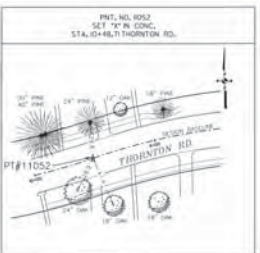
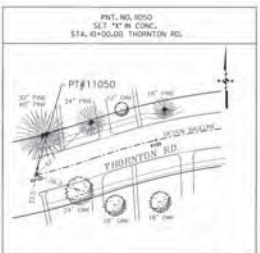
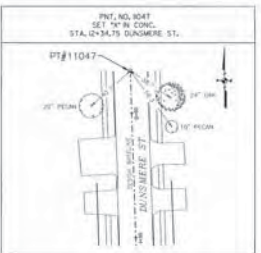
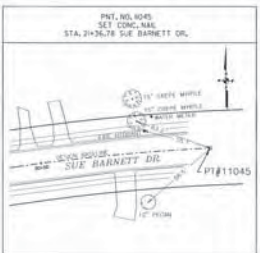
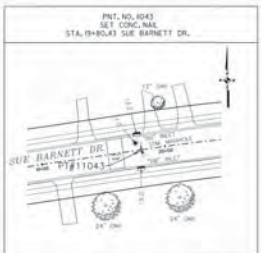
GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING
 SURVEY SWING TIES

WBS NUMBER
 W-000285-000-4
 DRAWING SCALE
 P=50'
 CITY OF HOUSTON PM
 JEFFREY T. HALL, P.E.
 SHEET NO. 46 OF 385

FOR CITY OF HOUSTON USE ONLY:

 55630

DATE: 03/02/2015
 BY: JTH



No.	Date	Revisions	Scale

- NOTES:
1. ALL COORDINATES AND BEARINGS SHOWN HEREON ARE REFERENCED TO THE TEXAS COORDINATE SYSTEM SOUTH CENTRAL ZONE (NAD83), NORTH AMERICAN DATUM OF 1983 (CORS 2011 ADJUSTED), ALL COORDINATES ARE GRID VALUES AND CAN BE CONVERTED TO SURFACE BY DIVIDING BY THE COMBINED SCALE FACTOR OF 0.999993.
 2. ALL ELEVATIONS SHOWN HEREON ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD83) (CORS 2011 ADJUSTED), ALL ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD83) (CORS 2011 ADJUSTED).
 3. TO CONVERT FROM NAVD83/CORS 2011 ADJUSTED TO FEMA DATUM (NAVD83/2000 ADJUSTED) ADD 0.02 FEET. PROJECT DATUM = 0.02 FEET + FEMA DATUM BASED ON THE TO HARRIS COUNTY FLOODPLAIN REFERENCE MARK 050270 ON 6/20/14.
 4. THIS IS NOT A BOUNDARY SURVEY.

PROJECT BENCHMARK DATA:
CITY OF HOUSTON MONUMENT NO. 5260-8208,
A TYPE 4A MARK LOCATED ON THE
NORTHEAST CORNER OF ALBA ROAD AND
SUE BARNETT DRIVE, ELEVATION = 74.48'
(NAVD83/CORS 2011 ADJUSTED)



CONSULTANT:
LANDPAC CONSULTANTS, INC.
2008 North Loop West
Houston, Texas 77008
Tel: 281.862.8800
TSP's REG. NO. 009800

SEAL:
RUSSELL HENDERSON
Professional Engineer
03/02/2015

PGAL
NO. 1852
NO. 2922
3131 BRAMPARK, SUITE 300
Houston, Texas 77002
Phone (713) 622-1444
Fax (713) 998-8333

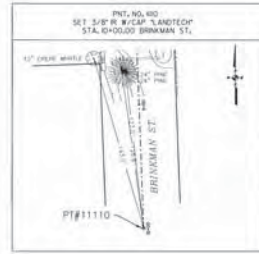
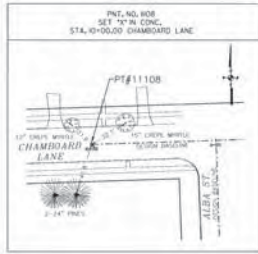
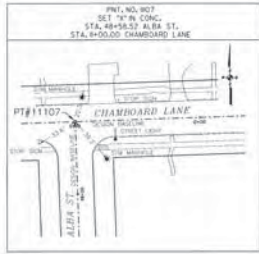
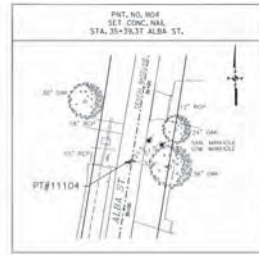
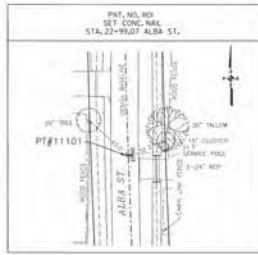
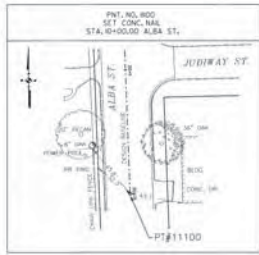
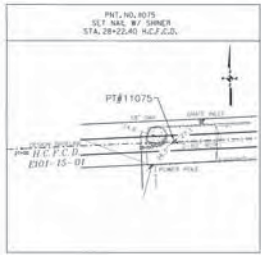
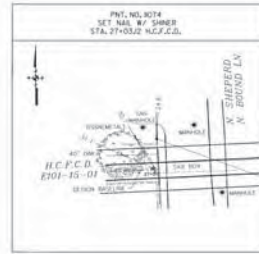
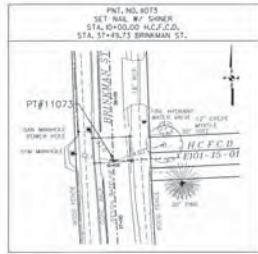
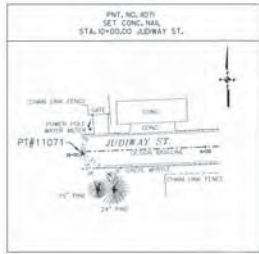
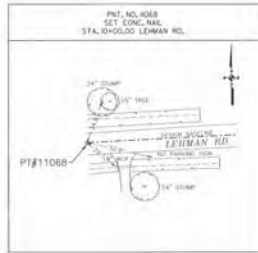
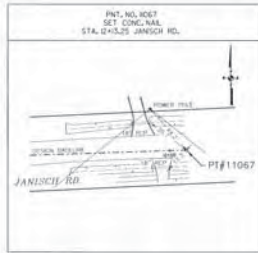
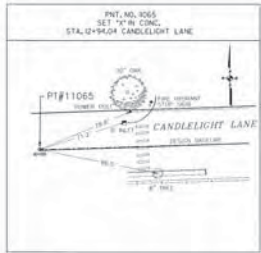
CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND
SHEPHERD PARK (CENTRAL)
DRAINAGE AND PAVING
SURVEY SWING TIES

NBS NUMBER
M-000285-000-4
DRAWING SCALE
1"=50'
CITY OF HOUSTON PW
JEFFREY T. HALL, P.E.
SHEET NO. 47 OF 385

FOR CITY OF HOUSTON
USE ONLY:
55630

DATE: 04/07/15
BY: JTH



No.	Date	Revisions	Scale

- NOTES:
1. ALL COORDINATES AND BEARINGS SHOWN HEREON ARE REFERENCED TO THE TEXAS COORDINATE SYSTEM, SOUTH CENTRAL ZONE, 1983, NORTH AMERICAN DATUM OF 1983. COORDINATE 2000 EPOCH DATE. ALL COORDINATES ARE GRID VALUES AND CAN BE CONVERTED TO SURFACE BY DIVIDING BY THE COMBINED SCALE FACTOR OF 0.99999998.
 2. ALL ELEVATIONS SHOWN HEREON ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988. NAVD83/COORS 2008 ADJUSTED EPOCH DATE/GEODETIC.
 3. TO CONVERT FROM NAVD83/COORS (2008 ADJUSTED) EPOCH DATE/GEODETIC TO FEMA DATUM (NAVD83/2000 ADJUSTED) ADD 0.02 FEET. (PROJECT DATUM = 0.02 FEET + FEMA DATUM BASED ON THE 1988 HARRIS COUNTY FLOODPLAIN REFERENCE MARK (2008) ON 8/10/14).
 4. THIS IS NOT A BOUNDARY SURVEY.

PROJECT BENCHMARK DATA:
CITY OF HOUSTON MONUMENT NO. 5260-8208, A TYPE 4A MARK LOCATED ON THE NORTHEAST CORNER OF ALBA ROAD AND SUE BARRETT DRIVE. ELEVATION = 74.48' (NAVD83/COORS 2008 ADJUSTED)



CONSULTANT: LANDFORM CONSULTANTS, INC. 2008 North Loop West Houston, Texas 77008

SEAL: RUSSELL HENDERSON

TSPS REG. NO. 009900

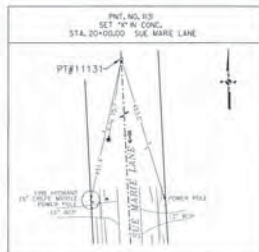
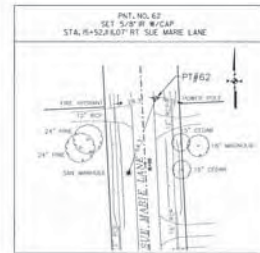
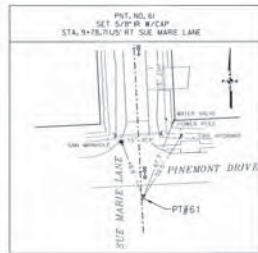
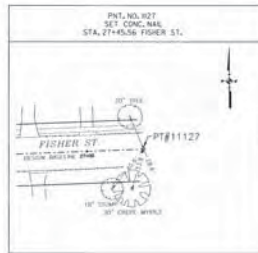
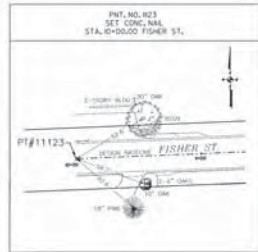
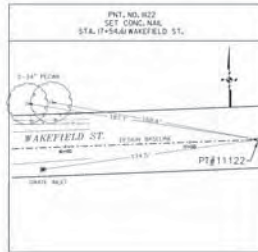
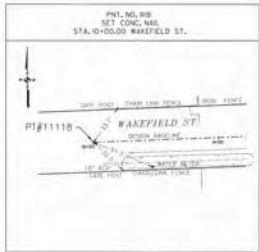
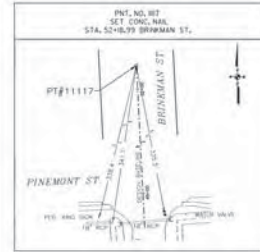
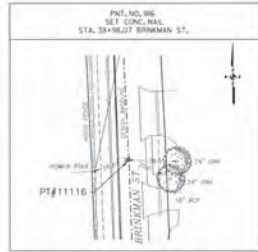
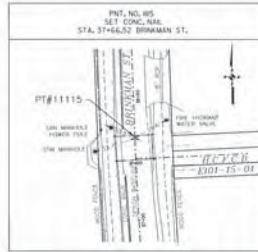
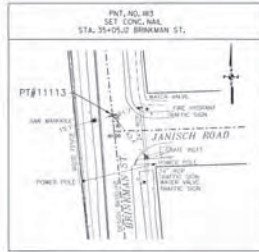
PGAL
PROFESSIONAL GEOTECHNICAL ASSOCIATION OF TEXAS
3131 BRAMPARK, SUITE 200 Houston, Texas 77022 Phone: (713) 622-1444 Fax: (713) 666-8333

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING
SURVEY SWING TIES

NBS NUMBER: M-000285-000-4
DRAWING SCALE: P150'
CITY OF HOUSTON PW
JEFFREY T. HALL, P.E.
SHEET NO. 48 OF 385

FOR CITY OF HOUSTON USE ONLY:
55630

DATE: 08/27/2015
BY: JTH



No.	Date	Revisions	ADD.

- NOTES:
1. ALL COORDINATES AND BEARINGS SHOWN HEREON ARE REFERENCED TO THE TEXAS COORDINATE SYSTEM, SOUTH CENTRAL ZONE, NORTH AMERICAN DATUM OF 1983/CORS 10N/98/200 ADJUST. ALL COORDINATES ARE GRID VALUES AND CAN BE CONVERTED TO SURFACE BY DIVIDING BY THE COMBINED SCALE FACTOR OF 0.999998.
 2. ALL ELEVATIONS SHOWN HEREON ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988/NAVD83/CORS 10N/98/200 EPOCH DATE/GEODAL.
 3. TO CONVERT FROM NAVD83/CORS 10N/98/200 EPOCH DATE/GEODAL TO TEMA DATUM (NAVD83/200 ADJUST) ADD 0.02 FEET. PROJECT DATUM = 0.02 FEET + TEMA DATUM BASED ON TIE TO HARRIS COUNTY FLOODPLAIN REFERENCE MARK 03075 ON 6/07/14.
 4. THIS IS NOT A BOUNDARY SURVEY.

PROJECT BENCHMARK DATA:
CITY OF HOUSTON MONUMENT NO. 5260-8208,
A TYPE 44 MARK LOCATED ON THE
NORTHEAST CORNER OF ALBA ROAD AND
SUE BARNETT DRIVE, ELEVATION = 74.48'
(NAVD83/CORS 20N ADJUST)



CONSULTANTS:
LANDSCAP CONSULTANTS, INC.
1008 North Loop West
Houston, Texas 77008
T8PLS REG. NO. 000900

SEAL:
RUSSELL HENDERSON
Professional Engineer
03/02/2015

PGAL
1996 REG.
3131 BRANBARK, SUITE 200
HOUSTON, TEXAS 77012
Phone: (713) 622-1444
Fax: (713) 666-8333

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND
SHEPHERD PARK (CENTRAL)
DRAINAGE AND PAVING
SURVEY SWING TIES

WBS NUMBER
M-000285-000-4

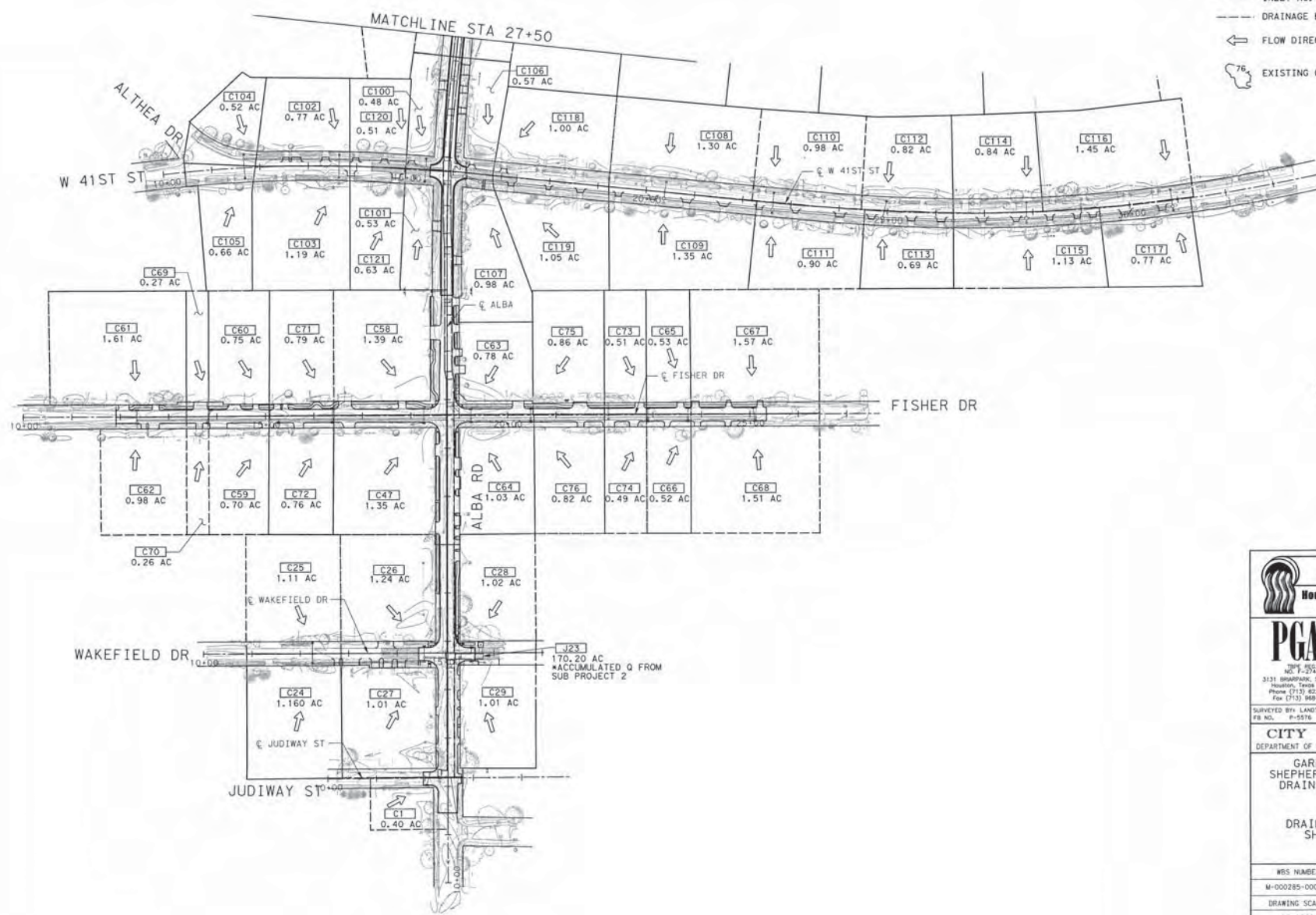
DRAWING SCALE
1"=50'

CITY OF HOUSTON PW
JEFFREY T. HALL, P.E.
SHEET NO. 49 OF 385

FOR CITY OF HOUSTON
USE ONE
55630

DATE: 08/27/15
BY: JTB

- DRAINAGE AREA MAP LEGEND**
- CXX DRAINAGE AREA NO. / INLET NO.
 - DRAINAGE BOUNDARY
 - ⇨ FLOW DIRECTION
 - EXISTING CONTOUR



SDPS
Houston Storm Drainage Program Support

PGAL
3131 BRUNSWICK, SUITE 200
HOUSTON, TEXAS 77042
PHONE (713) 852-1444
FAX (713) 968-9333

SUPPLIED BY: LANDTECH
P-5576

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

OVERALL DRAINAGE AREA MAP SHEET 1 OF 4

WSS NUMBER: M-000285-0001-4
DRAWING SCALE: 1"=100'

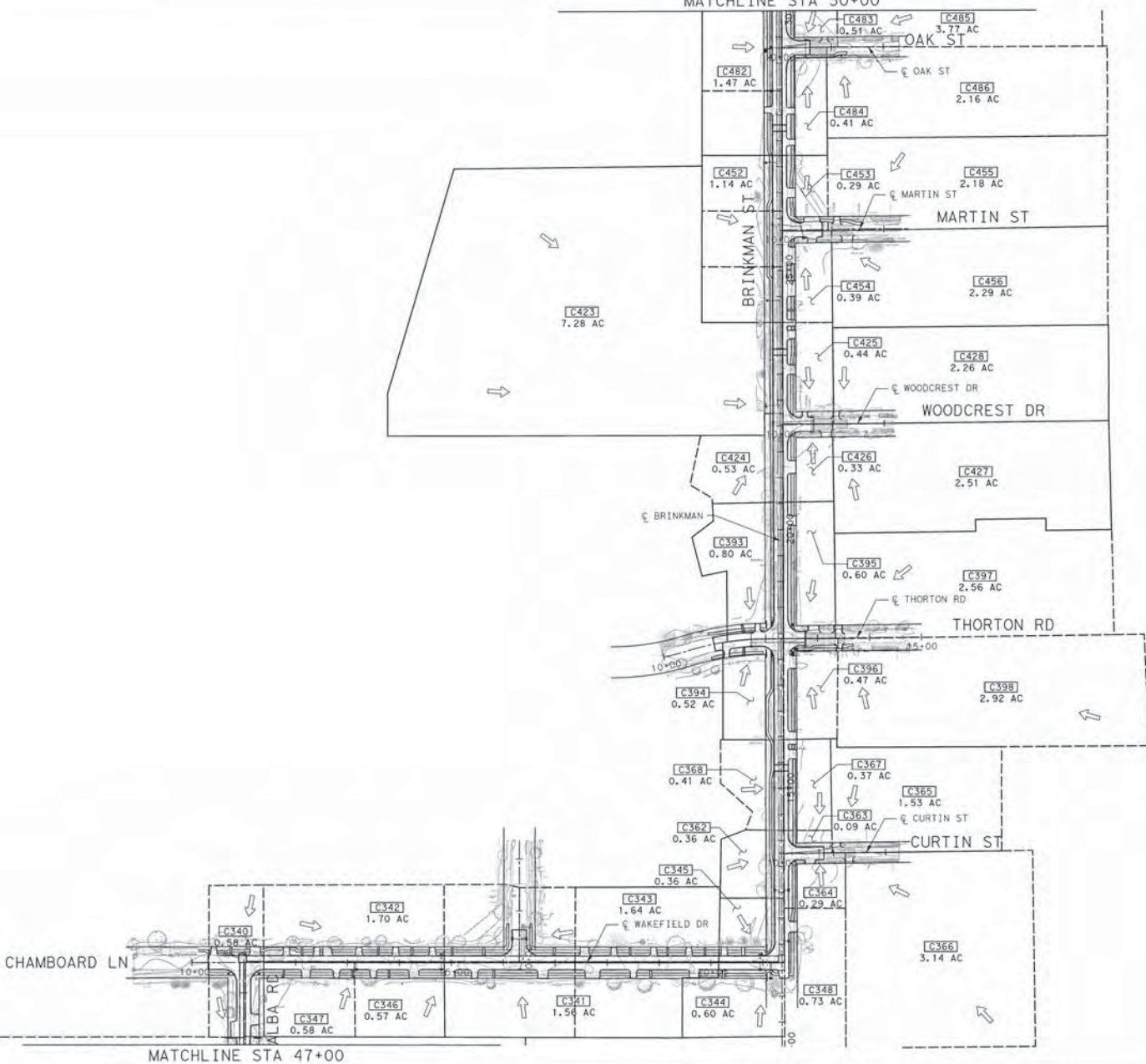
CITY OF HOUSTON PW
JEFFREY T. HALL, P.E.
SHEET NO. 51 OF 385

55630

DATE: 9/10/2015 6:02:59 AM
PROJECT: 20150915-20150915-DRAINAGE-DRAWING-01

DATE: 9/20/2015 6:07:48 AM
 DRAWING: M-000285-0001-4.DWG

MATCHLINE STA 30+00



MATCHLINE STA 47+00

- DRAINAGE AREA MAP LEGEND**
- CXX DRAINAGE AREA NO. / INLET NO.
 - DRAINAGE BOUNDARY
 - ← FLOW DIRECTION
 - EXISTING CONTOUR



SDPS
Houston Storm Drainage Program Support

PGAL
3131 BRANIFF PARK, SUITE 200
 HOUSTON, TEXAS 77042
 PHONE (713) 652-1444
 FAX (713) 968-9333

SURVEYED BY: LANDTECH
 F.B. NO. P-53176

CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

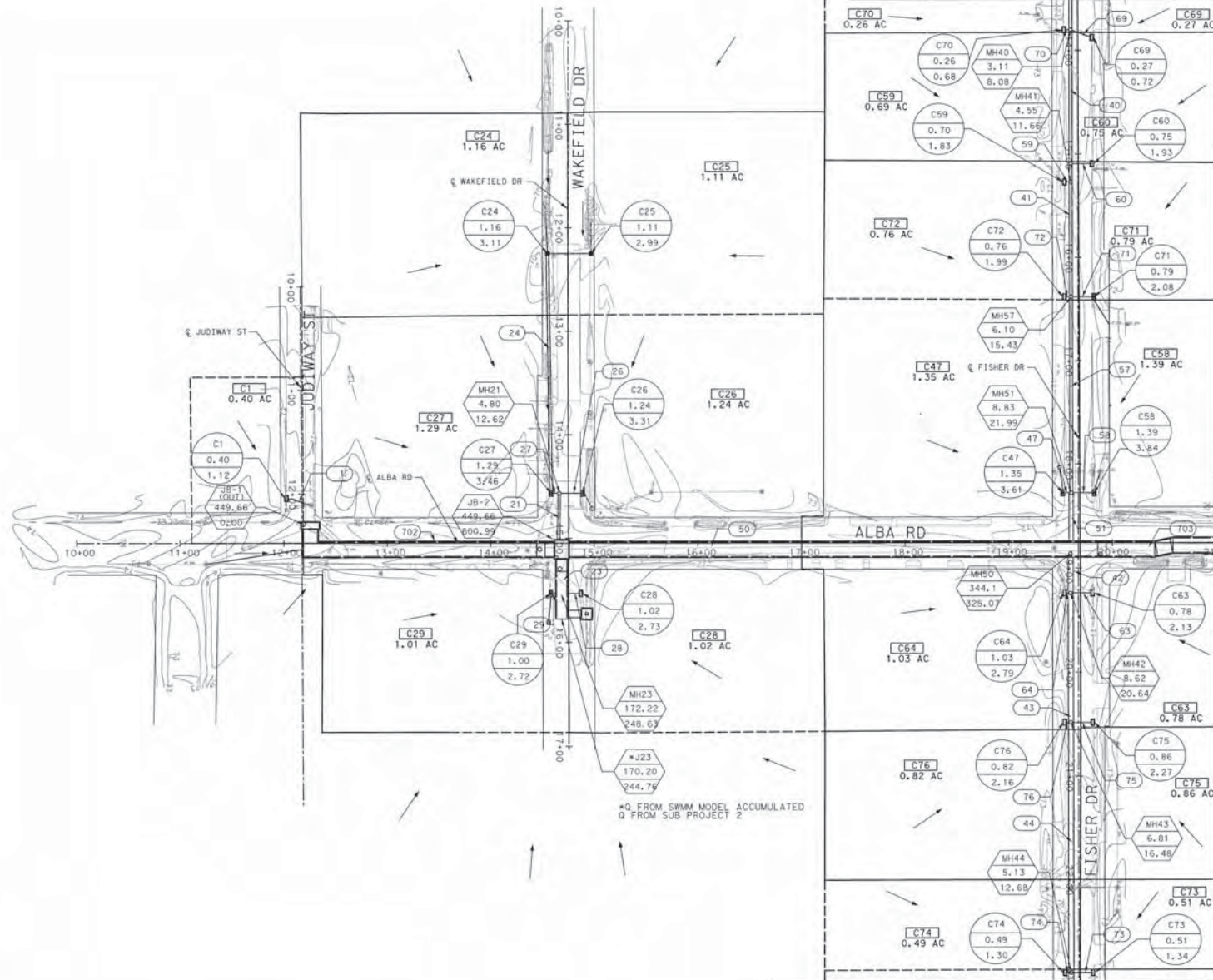
GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

OVERALL DRAINAGE AREA MAP
 SHEET 3 OF 4

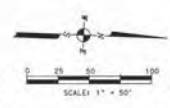
WBS NUMBER	M-000285-0001-4
DRAWING SCALE	1"=100'
CITY OF HOUSTON PW	JEFFREY T. HALL, P.E.
SHEET NO. 53 OF 385	55630

DATE: 9/30/2015 6:56:00 AM
 NUMBER: 54200001 D:\DWG\DWG_DRAWING.DWG

MATCHLINE STA 13+50 (FISHER DR)
 (SHEET 9 OF 11)



*Q FROM SWMM MODEL ACCUMULATED
 Q FROM SUB PROJECT 2



- DRAINAGE LEGEND**
- C#** DRAINAGE AREA NO. / INLET NO.
 - MH#** MANHOLE NUMBER
 - AC** CUMULATIVE AREA-2YR
 - CFS** CUMULATIVE FLOW-2YR
 - DA#** DRAINAGE AREA NUMBER
 - AC** DRAINAGE AREA-2YR
 - CFS** DRAINAGE AREA FLOW-2YR
 - - -** DRAINAGE BOUNDARY
 - PROPOSED FLOW DIRECTION
 - #** HOUSTORM RUN NUMBER
 - 76** EXISTING CONTOUR

MATCHLINE STA 21+00

MATCHLINE STA 23+00 (FISHER DR) (SHEET 8 OF 10)

SDPS
Houston Storm Drainage Program Support

PGAL
NO. P-5552
3131 BROADWAY, SUITE 200
HOUSTON, TEXAS 77042
PHONE: (713) 822-1444
FAX: (713) 868-9333

SURVEYED BY: LANDTECH
FB NO. P-9576

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

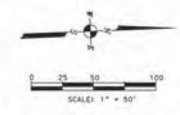
GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

DRAINAGE AREA MAP
SHEET 1 OF 10

WBS NUMBER: M-000285-0001-4
DRAWING SCALE: 1"=50'
CITY OF HOUSTON PM: JEFFREY T. HALL, P.E.
SHEET NO. 55 OF 385

55630

DATE: 01/20/2005 6:56:07 AM
 P:\020045-02\020045-02\DWG\DWG\020045-02.dwg



- DRAINAGE LEGEND**
- C## DRAINAGE AREA NO. / INLET NO.
 - MH## MANHOLE NUMBER
 - AC CUMULATIVE AREA-2YR
 - CFS CUMULATIVE FLOW-2YR
 - DA## DRAINAGE AREA NUMBER
 - AC DRAINAGE AREA-2YR
 - CFS DRAINAGE AREA FLOW-2YR
 - DRAINAGE BOUNDARY
 - PROPOSED FLOW DIRECTION
 - ## HOUSTORM RUN NUMBER
 - EXISTING CONTOUR

SDPS
Houston Storm Drainage Program Support

PGAL
2005 REG.
 NO. P-2762
 3131 BRIMMANK, SUITE 200
 HOUSTON, TEXAS 77042
 PHONE (713) 652-1444
 FAX (713) 968-9333

SURVEYED BY: LANDTECH
 FB NO. P-9516

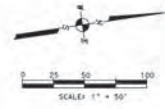
CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

DRAINAGE AREA MAP
 SHEET 2 OF 10

WBS NUMBER	M-000285-0001-4
DRAWING SCALE	1"=50'
CITY OF HOUSTON PM	JEFFREY T. HALL, P.E.
DRAWING NO.	55630
SHEET NO.	56 OF 385

DATE: 06/20/2005 6:56:06 AM
 DRAWING: C:\DWG\0000\DWG\CONV\0194_1004.dwg



- DRAINAGE LEGEND**
- C#** DRAINAGE AREA NO. / INLET NO.
 - MH#** MANHOLE NUMBER
 - AC** CUMULATIVE AREA-2YR
 - CFS** CUMULATIVE FLOW-2YR
 - DA#** DRAINAGE AREA NUMBER
 - AC** DRAINAGE AREA-2YR
 - CFS** DRAINAGE AREA FLOW-2YR
 - - -** DRAINAGE BOUNDARY
 - PROPOSED FLOW DIRECTION
 - #** HOUSTORM RUN NUMBER
 - - -** EXISTING CONTOUR

SDPS
Houston Storm Drainage Program Support

PGAL
3131 BRINDLEWOOD, SUITE 200
Houston, Texas 77042
Phone (713) 622-1444
Fax (713) 968-9333

SURVEYED BY: LANDTECH
P.E. #55176

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

DRAINAGE AREA MAP
SHEET 3 OF 10

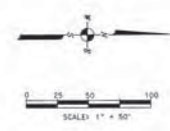
WBS NUMBER
M-000285-0001-4

DRAWING SCALE
1"=50'

CITY OF HOUSTON PW
JEFFREY T. HALL, P.E.
SHEET NO. 57 OF 385

55630

- DRAINAGE LEGEND**
- C#** DRAINAGE AREA NO. / INLET NO.
 - MH#** MANHOLE NUMBER
 - AC** CUMULATIVE AREA-2YR
 - CFS** CUMULATIVE FLOW-2YR
 - DA#** DRAINAGE AREA NUMBER
 - AC** DRAINAGE AREA-2YR
 - CFS** DRAINAGE AREA FLOW-2YR
 - - -** DRAINAGE BOUNDARY
 - PROPOSED FLOW DIRECTION
 - #** HOUSTORM RUN NUMBER
 - 76** EXISTING CONTOUR



DATE: 9/20/2015 6:58:09 AM
 DRAWN BY: GAN/DBE DBE/SW/JOH/DAC/01

SDPS
Houston Storm Drainage Program Support

PGAL
225 P. 055,
 AC P-2742
 3131 BRANIFF, SUITE 200
 Houston, Texas 77042
 Phone (713) 652-1444
 Fax (713) 968-9333

SURVEYED BY: LANDTECH
 FB NO.: 8-5016

CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

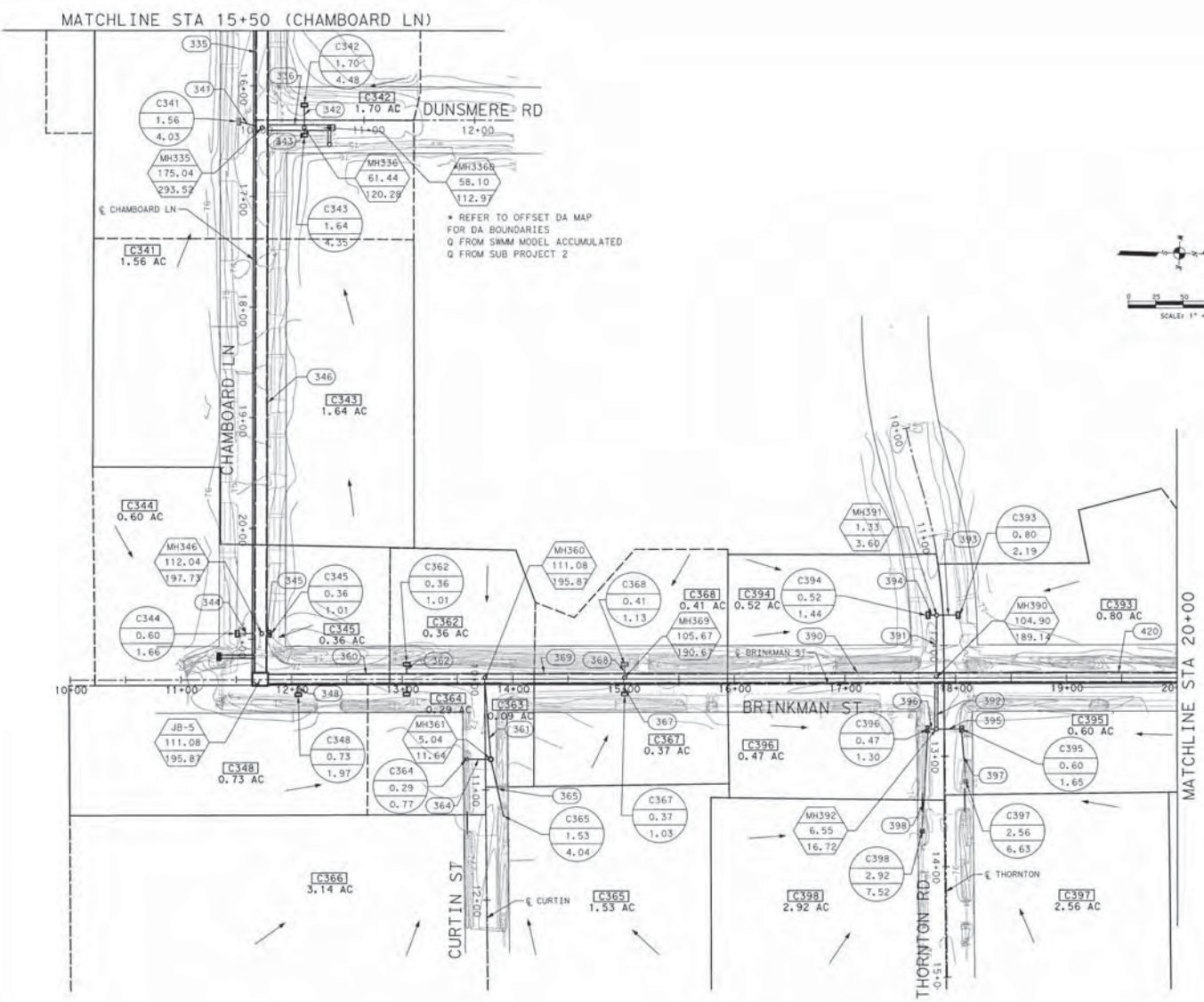
GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

DRAINAGE AREA MAP
 SHEET 4 OF 10

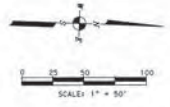
WBS NUMBER
 M-000285-0001-4

DRAWING SCALE
 1"=50'

CITY OF HOUSTON PW
 JEFFREY T. HALL, P.E.
 SHEET NO. 58 OF 385



- DRAINAGE LEGEND**
- C#** DRAINAGE AREA NO. / INLET NO.
 - MH#** MANHOLE NUMBER
 - AC** CUMULATIVE AREA-2YR
 - CFS** CUMULATIVE FLOW-2YR
 - DA#** DRAINAGE AREA NUMBER
 - AC** DRAINAGE AREA-2YR
 - CFS** DRAINAGE AREA FLOW-2YR
 - DRAINAGE BOUNDARY
 - PROPOSED FLOW DIRECTION
 - # HOUSTORM RUN NUMBER
 - 76' EXISTING CONTOUR



* REFER TO OFFSET DA MAP FOR DA BOUNDARIES
 O FROM SWMM MODEL ACCUMULATED
 Q FROM SUB PROJECT 2

SDPS
Houston Storm Drainage Program Support

PGAL

TYPE REG. NO. 7-2942
 3131 BROADBANK, SUITE 200
 HOUSTON, TEXAS 77042
 PHONE (713) 822-1444
 FAX (713) 968-9333

SURVEYED BY: LANDTECH
 FIB NO. 19-0376

CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

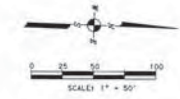
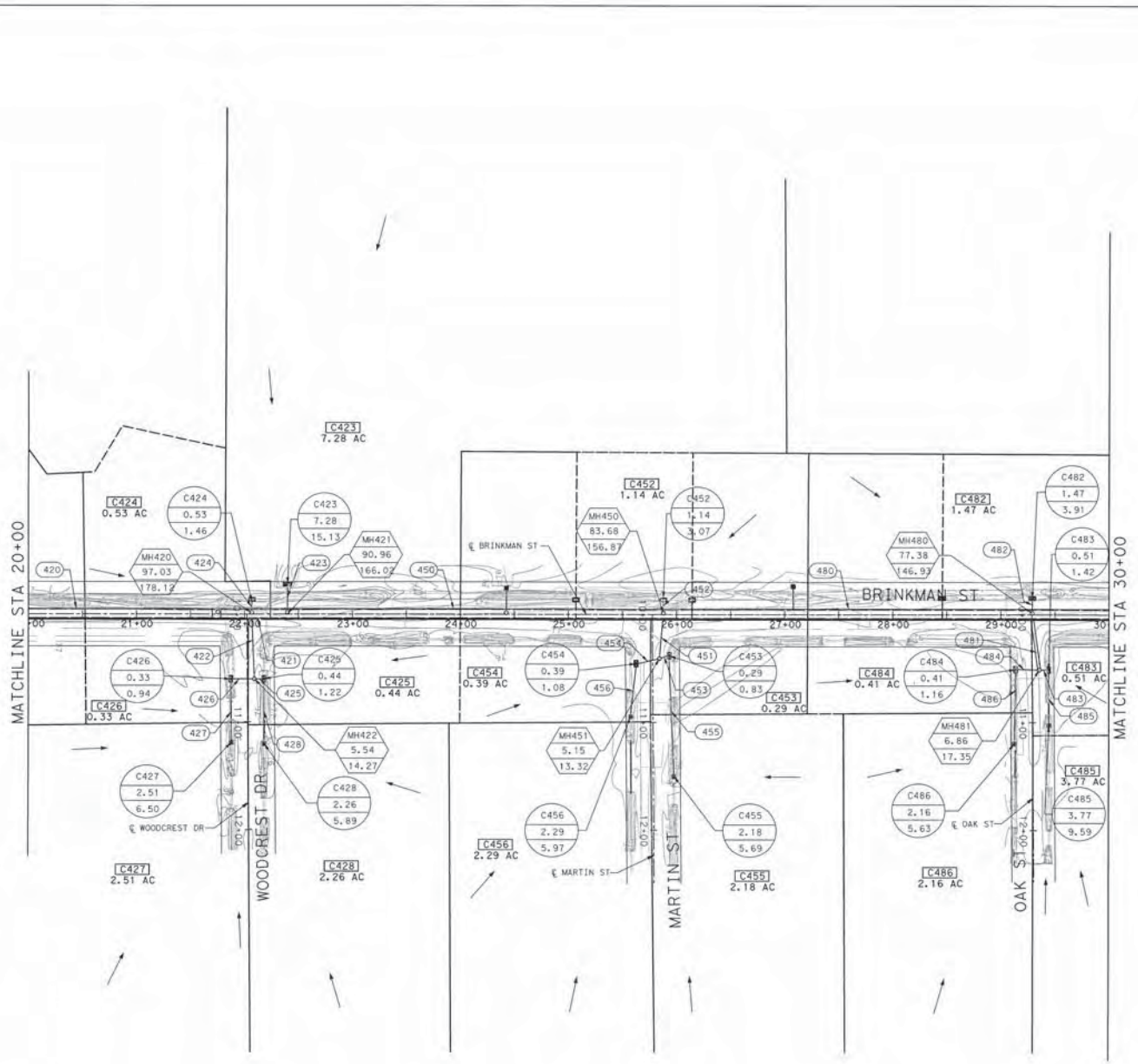
GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

DRAINAGE AREA MAP
 SHEET 5 OF 10

WBS NUMBER
M-000285-0001-4
DRAWING SCALE
1"=50'
CITY OF HOUSTON PM
JEFFREY T. HALL, P.E.
SHEET NO. 59 OF 385

DATE: 9/20/2005 6:58:11 AM
 PLANTING: C:\WORK\50000\DWG\DWG\DRN.DWG

DATE: 8/20/2025 6:58AM AM
 REVISION: C:\000000\DWG\Drawings\054_DWG.dwg



- DRAINAGE LEGEND**
- C ## DRAINAGE AREA NO. / INLET NO.
 - MH ## MANHOLE NUMBER
 - AC CUMULATIVE AREA-2YR
 - CFS CUMULATIVE FLOW-2YR
 - DA # DRAINAGE AREA NUMBER
 - AC DRAINAGE AREA-2YR
 - CFS DRAINAGE AREA FLOW-2YR
 - DRAINAGE BOUNDARY
 - PROPOSED FLOW DIRECTION
 - # HOUSTORM RUN NUMBER
 - EXISTING CONTOUR

SDPS
Houston Storm Drainage Program Support

PGAL
Professional Geotechnical Associates, L.P.
3131 Broadway, Suite 200
Houston, Texas 77042
Phone: (713) 822-1444
Fax: (713) 968-9333

SURVEYED BY: LANGTECH
PR. NO. P-5516

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND
SHEPHERD PARK (CENTRAL)
DRAINAGE AND PAVING

DRAINAGE AREA MAP
SHEET 6 OF 10

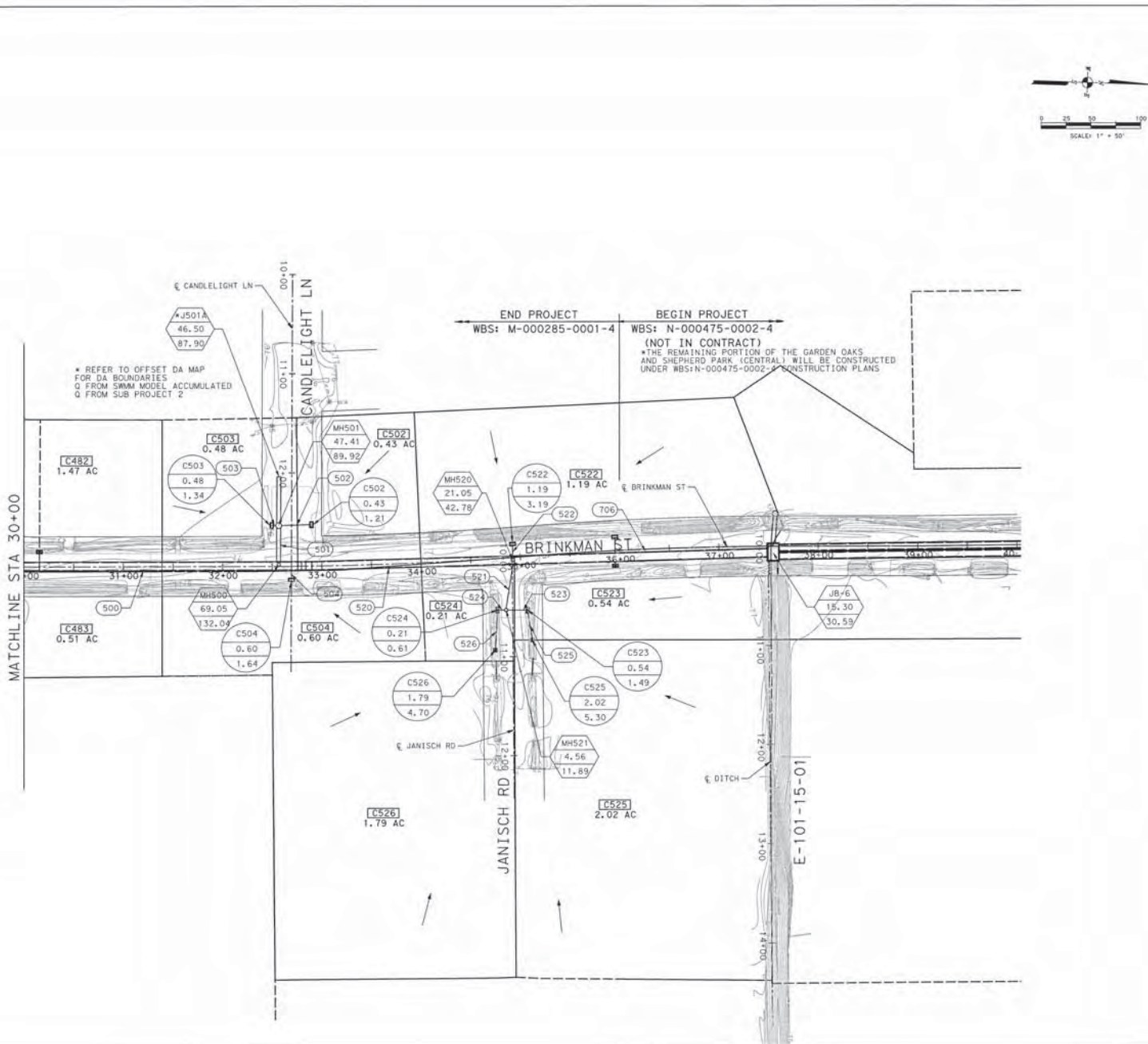
WBS NUMBER
M-000285-0001-4

DRAWING SCALE
1"=50'

CITY OF HOUSTON PM
JEFFREY T. HALL, P.E.
SHEET NO. 60 OF 385

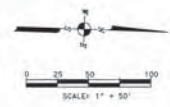


DATE: 9/20/2005 6:00:07 AM
 P:\000000\000000\DWG\000000\000000.DWG



* REFER TO OFFSET DA MAP FOR DA BOUNDARIES
 Q FROM SWMM MODEL ACCUMULATED
 Q FROM SUB PROJECT 2

END PROJECT WBS: M-000285-0001-4
 BEGIN PROJECT WBS: N-000475-0002-4
 (NOT IN CONTRACT)
 *THE REMAINING PORTION OF THE GARDEN OAKS AND SHEPHERD PARK (CENTRAL) WILL BE CONSTRUCTED UNDER WBS:N-000475-0002-4 CONSTRUCTION PLANS



- DRAINAGE LEGEND**
- C# DRAINAGE AREA NO. / INLET NO.
 - MH# MANHOLE NUMBER
 - AC CUMULATIVE AREA-2YR
 - CFS CUMULATIVE FLOW-2YR
 - DA# DRAINAGE AREA NUMBER
 - AC DRAINAGE AREA-2YR
 - CFS DRAINAGE AREA FLOW-2YR
 - DRAINAGE BOUNDARY
 - PROPOSED FLOW DIRECTION
 - # HOUSTORM RUN NUMBER
 - 76 EXISTING CONTOUR



SDPS
Houston Storm Drainage Program Support



PGAL
TYPE REC NO. T-2542
3131 BIRKDALE, SUITE 200
HOUSTON, TEXAS 77042
PHONE (713) 822-1444
FAX (713) 988-8333

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

DRAINAGE AREA MAP
SHEET 7 OF 10

WBS NUMBER
M-000285-0001-4

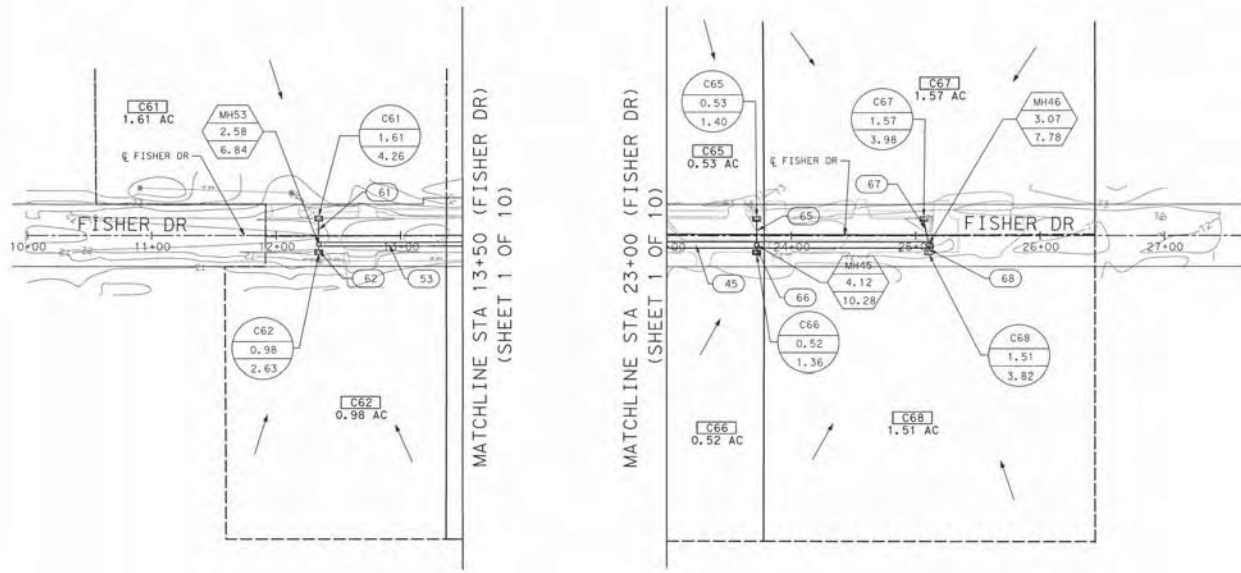
DRAWING SCALE
1"=50'

CITY OF HOUSTON PM
JEFFREY T. HALL, P. E.

SHEET NO. 61 OF 385



DATE: 9/20/2015 6:56:00 AM
 DRAWING: C:\WORK\2015\DRG\DWG\OAK_1A09.dwg



- DRAINAGE LEGEND**
- C# DRAINAGE AREA NO. / INLET NO.
 - MH# MANHOLE NUMBER
 - AC CUMULATIVE AREA-2YR
 - CFS CUMULATIVE FLOW-2YR
 - DA# DRAINAGE AREA NUMBER
 - AC DRAINAGE AREA-2YR
 - CFS DRAINAGE AREA FLOW-2YR
 - DRAINAGE BOUNDARY
 - PROPOSED FLOW DIRECTION
 - # HOUSTORM RUN NUMBER
 - 76 EXISTING CONTOUR

SDPS
Houston Storm Drainage
Program Support

PGAL
TYPE REG. NO. F-2952
 3131 DRAINAGE, SUITE 200
 Houston, Texas 77042
 Phone (713) 622-1444
 Fax (713) 968-9333

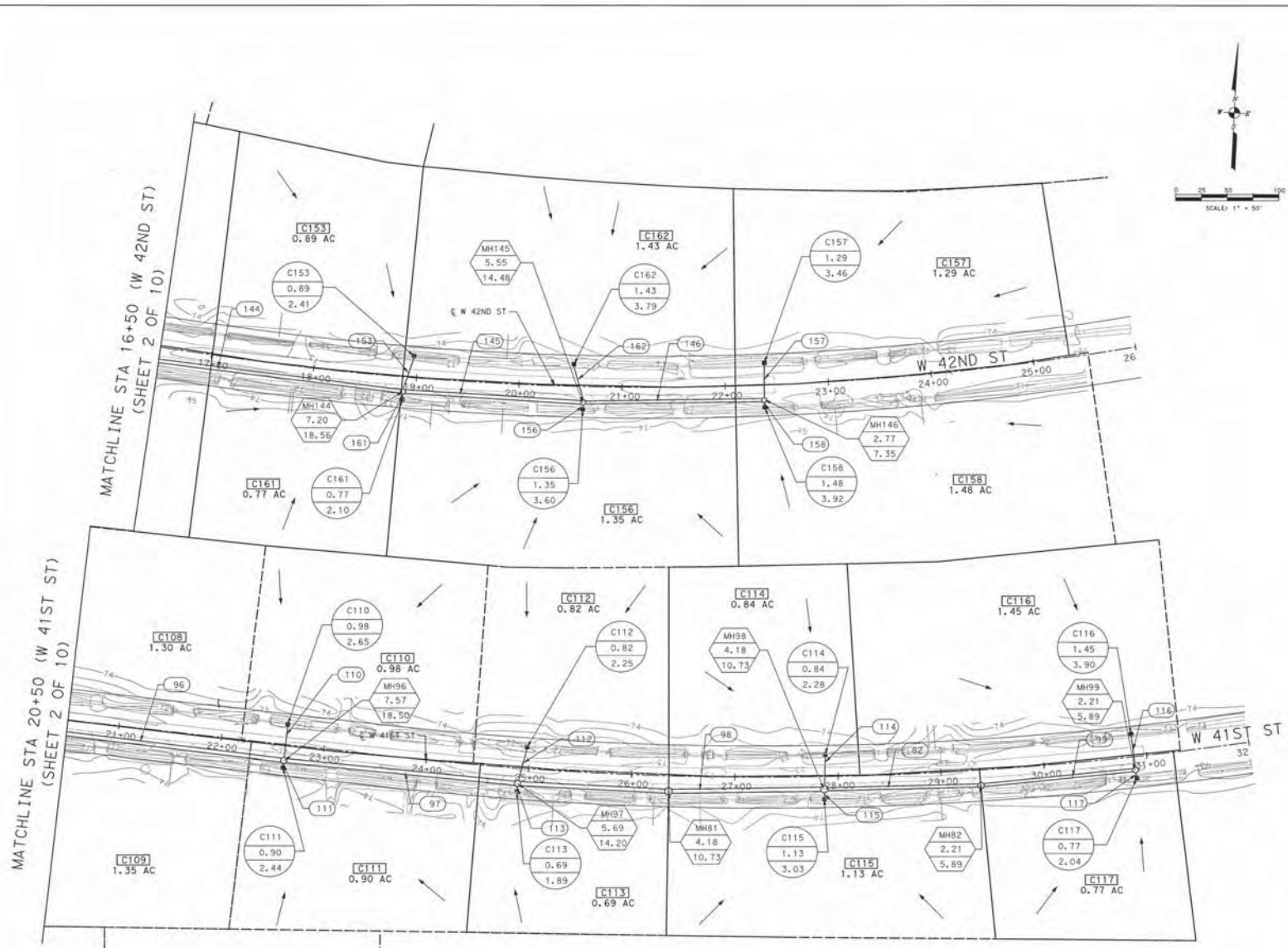
SURVEYED BY: LANDTECH
 P.E. NO. 31516

CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND
 SHEPHERD PARK (CENTRAL)
 DRAINAGE AND PAVING
 DRAINAGE AREA MAP
 SHEET 8 OF 10

MIS NUMBER	55630
M-000285-0001-4	
DRAWING SCALE	
1"=50'	
CITY OF HOUSTON PM	
JEFFREY T. HALL, P. E.	
SHEET NO. 61A OF 385	

DATE: 02/20/2025 6:08:27 AM
 P:\2025\15-AC-02\1500_DRAINAGE\1500.dwg



- DRAINAGE LEGEND**
- C#** DRAINAGE AREA NO. / INLET NO.
 - MH#** MANHOLE NUMBER
 - AC** CUMULATIVE AREA-2YR
 - CFS** CUMULATIVE FLOW-2YR
 - DA#** DRAINAGE AREA NUMBER
 - AC** DRAINAGE AREA-2YR
 - CFS** DRAINAGE AREA FLOW-2YR
 - DRAINAGE BOUNDARY
 - PROPOSED FLOW DIRECTION
 - # HOUSTORM RUN NUMBER
 - 76 EXISTING CONTOUR



SDPS
Houston Storm Drainage Program Support

PGAL
TYPE 900
NO. F-2942
3131 BRINDLEY, SUITE 200
HOUSTON, TEXAS 77042
PHONE (713) 852-1444
FAX (713) 968-9333

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

DRAINAGE AREA MAP
SHEET 9 OF 10

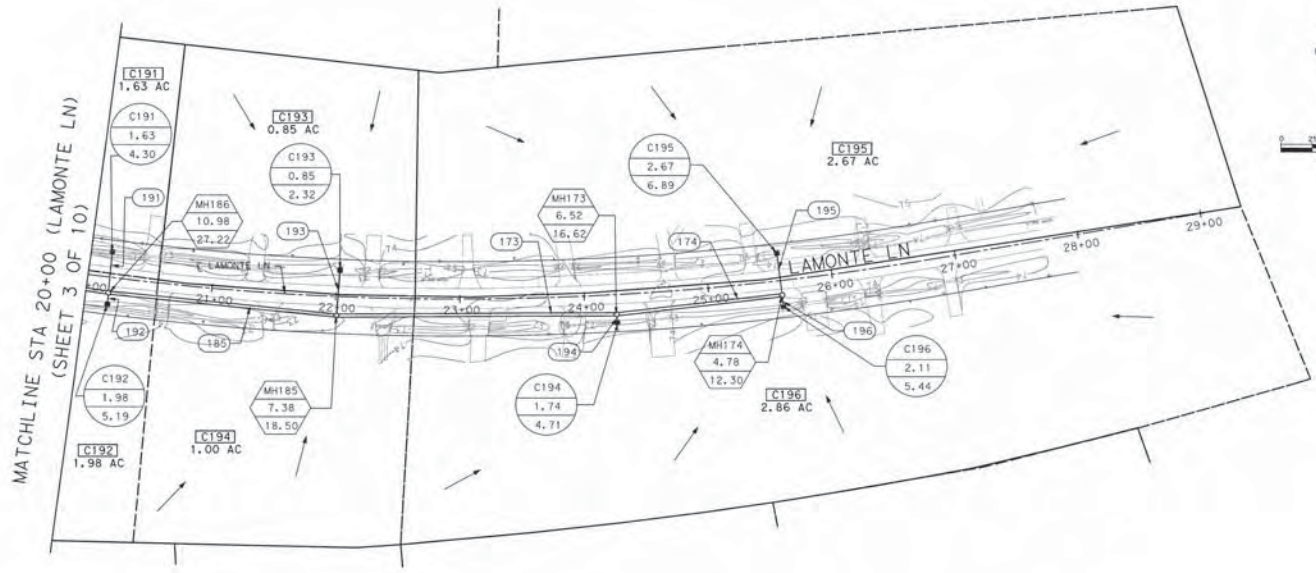
WBS NUMBER
M-000285-0001-4

DRAWING SCALE
1"=50'

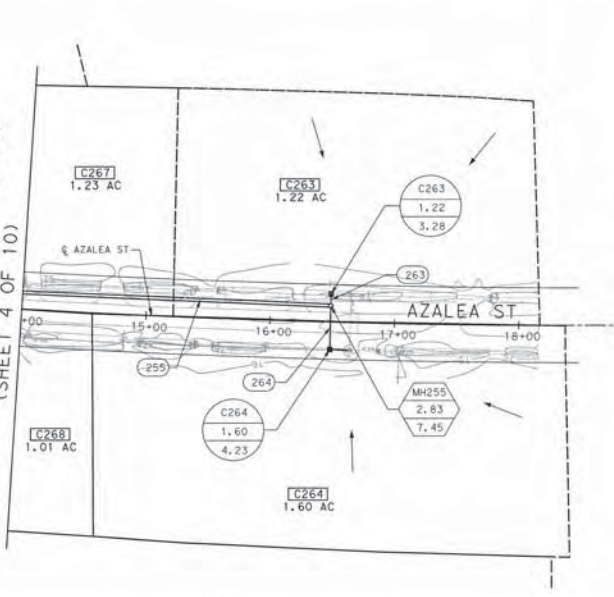
CITY OF HOUSTON PM
JEFFREY T. HALL, P. E.
SHEET NO. 62 OF 395

55630

DATE: 9/10/2005 6:08:25 AM
 P:\PROJECTS\040902_DRAIN\DWG\DWG_10.dwg



MATCHLINE STA 20+00 (LAMONTE LN)
 (SHEET 3 OF 10)



MATCHLINE STA 14+00 (AZALEA ST)
 (SHEET 4 OF 10)

- DRAINAGE LEGEND**
- C #** DRAINAGE AREA NO. / INLET NO.
 - MH #** MANHOLE NUMBER
 - AC** CUMULATIVE AREA-2YR
 - CFS** CUMULATIVE FLOW-2YR
 - DA #** DRAINAGE AREA NUMBER
 - AC** DRAINAGE AREA-2YR
 - CFS** DRAINAGE AREA FLOW-2YR
 - - -** DRAINAGE BOUNDARY
 - PROPOSED FLOW DIRECTION
 - #** HOUSTORM RUN NUMBER
 - 76** EXISTING CONTOUR

SDPS
 Houston Storm Drainage Program Support

PGAL
 TYPE REG. NO. F-2942
 3131 BRIDGEMAN, SUITE 200
 HOUSTON, TEXAS 77042
 PHONE (713) 822-1444
 FAX (713) 968-9333

SUPPLIED BY: LANDTECH
 FIRM NO. 01-0516

CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

DRAINAGE AREA MAP
 SHEET 10 OF 10

WBS NUMBER
 M-000285-0001-4

DRAWING SCALE
 1"=50'

CITY OF HOUSTON PM
 JEFFREY T. HALL, P.E.
 SHEET NO. 63 OF 385

55630

PROJECT NAME: Garden Oaks
 JOB NUMBER: 100109
 PROJECT DESCRIPTION: Garden Oaks
 DESIGN FREQUENCY: 2 YEARS
 MEASUREMENT UNITS: English

Runoff Computations for Design Frequency.

ID	C Value	Area (acre)	Tc (min)	Tc Used (min)	Intensity (in/hr)	Total Q (cfs)
C1	0.650	0.398	23.50	23.50	4.315	1.116
C24	0.650	1.160	25.26	25.26	4.131	3.114
C25	0.650	1.113	25.19	25.19	4.138	2.992
C26	0.650	1.236	25.38	25.38	4.119	3.309
C27	0.650	1.293	25.46	25.46	4.111	3.455
C28	0.650	1.015	25.15	25.15	4.142	2.732
C29	0.650	1.007	25.01	25.01	4.156	2.721
C47	0.650	1.949	25.42	25.42	4.115	3.607
C58	0.650	1.349	24.06	24.06	4.254	3.838
C59	0.650	0.695	25.95	25.95	4.063	1.834
C60	0.650	0.747	26.93	26.93	3.971	1.928
C61	0.650	1.607	25.76	25.76	4.081	4.263
C62	0.650	0.975	25.15	25.15	4.142	2.625
C63	0.650	0.779	24.57	24.57	4.201	2.126
C64	0.650	1.034	25.06	25.06	4.151	2.790
C65	0.650	0.534	26.20	26.20	4.039	1.402
C66	0.650	0.516	26.12	26.12	4.047	1.357
C67	0.650	1.569	27.70	27.70	3.903	3.981
C68	0.650	1.505	27.63	27.63	3.909	3.824
C69	0.650	0.272	25.95	25.95	4.063	0.719
C70	0.650	0.256	25.95	25.95	4.063	0.677
C71	0.650	0.788	25.95	25.95	4.063	2.082
C72	0.650	0.755	25.95	25.95	4.063	1.993
C73	0.650	0.516	26.12	26.12	4.047	1.337
C74	0.650	0.493	26.12	26.12	4.047	1.297
C75	0.650	0.863	26.12	26.12	4.047	2.270
C76	0.650	0.820	26.12	26.12	4.047	2.156
J23	0.650	170.200	37.80	37.80	3.196	244.764
C100	0.650	0.482	23.79	23.79	4.283	1.341
C101	0.650	0.527	23.93	23.93	4.268	1.462
C102	0.650	0.527	23.88	23.88	4.274	1.140
C103	0.650	1.457	25.69	25.69	4.088	3.157
C104	0.650	1.295	25.47	25.47	4.110	1.400
C105	0.650	1.025	25.04	25.04	4.153	1.780
C106	0.650	0.567	24.05	24.05	4.255	1.569
C107	0.650	0.980	24.96	24.96	4.161	2.650
C108	0.650	0.980	24.96	24.96	4.161	3.464
C109	0.650	1.346	25.54	25.54	4.103	3.590
C110	0.650	0.981	24.97	24.97	4.160	2.651
C111	0.650	0.897	24.81	24.81	4.176	2.435
C112	0.650	0.824	24.66	24.66	4.191	2.246
C113	0.650	0.689	24.37	24.37	4.222	1.890
C114	0.650	0.689	24.69	24.69	4.188	2.281
C115	0.650	1.126	25.21	25.21	4.136	3.028
C116	0.650	1.447	25.15	25.15	4.142	3.896
C117	0.650	0.765	25.54	25.54	4.103	2.041
C118	0.650	1.000	25.00	25.00	4.157	2.703
C119	0.650	1.045	25.08	25.08	4.149	2.818
C120	0.650	0.645	25.69	25.69	4.088	1.357
C121	0.650	0.511	25.69	25.69	4.088	1.685
C147	0.650	0.815	24.65	24.65	4.192	2.220
C148	0.650	0.303	23.10	23.10	4.359	0.859
C149	0.650	0.821	24.66	24.66	4.191	2.238
C150	0.650	0.389	23.47	23.47	4.318	1.093

ID	C Value	Area (acre)	Tc (min)	Tc Used (min)	Intensity (in/hr)	Total Q (cfs)
C151	0.650	2.332	26.61	26.61	4.001	6.064
C152	0.650	0.593	24.12	24.12	4.248	1.636
C153	0.650	0.593	24.79	24.79	4.178	2.412
C154	0.650	1.210	25.34	25.34	4.123	3.243
C155	0.650	0.974	24.95	24.95	4.162	2.635
C156	0.650	1.350	25.54	25.54	4.103	3.600
C157	0.650	1.294	25.46	25.46	4.111	3.458
C158	0.650	1.476	25.71	25.71	4.086	3.921
C159	0.650	1.163	25.27	25.27	4.130	3.122
C160	0.650	0.953	24.92	24.92	4.165	2.579
C161	0.650	0.769	24.55	24.55	4.203	2.101
C162	0.650	1.425	25.64	25.64	4.093	3.791
C187	0.650	0.496	23.87	23.87	4.275	1.268
C188	0.650	0.349	24.88	24.88	4.169	0.947
C189	0.650	0.933	23.25	23.25	4.343	0.945
C190	0.650	0.390	23.47	23.47	4.318	1.095
C191	0.650	1.626	25.89	25.89	4.069	4.301
C192	0.650	1.626	26.28	26.28	4.032	5.193
C193	0.650	0.853	24.73	24.73	4.184	2.320
C194	0.650	1.743	25.00	25.00	4.157	4.709
C195	0.650	2.668	26.89	26.89	3.975	6.893
C196	0.650	2.112	27.03	27.03	3.962	5.440
C197	0.650	2.002	26.30	26.30	4.030	5.244
C198	0.650	2.002	26.23	26.23	4.036	5.080
C199	0.650	1.936	24.47	24.47	4.211	2.016
C200	0.650	0.716	24.69	24.69	4.188	1.956
C201	0.650	0.336	23.25	23.25	4.343	0.950
C202	0.650	0.336	23.46	23.46	4.319	1.088
C203	0.650	0.699	24.88	24.88	4.169	1.893
C224	0.650	0.577	24.08	24.08	4.252	1.596
C225	0.650	0.577	24.74	24.74	3.989	6.433
C226	0.650	0.632	24.22	24.22	4.237	1.742
C227	0.650	1.712	25.99	25.99	4.059	4.517
C257	0.650	0.427	23.61	23.61	4.303	1.193
C258	0.650	0.161	22.25	22.25	4.457	0.609
C259	0.650	0.111	21.79	21.79	4.513	0.424
C260	0.650	0.111	22.98	22.98	4.373	0.579
C261	0.650	0.211	22.60	22.60	4.416	0.605
C262	0.650	0.275	22.97	22.97	4.374	0.781
C263	0.650	1.224	25.36	25.36	4.120	3.278
C264	0.650	1.601	25.86	25.86	4.071	4.236
C265	0.650	0.179	22.39	22.39	4.441	0.515
C266	0.650	0.179	22.33	22.33	4.448	0.493
C267	0.650	1.230	25.37	25.37	4.120	3.293
C268	0.650	1.015	25.03	25.03	4.154	2.742
C269	0.650	0.729	24.46	24.46	4.212	1.996
C270	0.650	0.073	21.31	21.31	4.572	0.217
C296	0.650	0.679	24.34	24.34	4.225	1.865
C297	0.650	0.679	24.64	24.64	4.193	2.217
C298	0.650	0.622	24.20	24.20	4.239	1.714
C299	0.650	0.930	24.87	24.87	4.170	2.521
C300	0.650	1.175	25.29	25.29	4.128	3.153
C301	0.650	1.175	24.77	24.77	4.180	2.387
C302	0.650	1.417	25.63	25.63	4.094	3.771

DATE: 8/20/2015 6:56:09 AM
 I:\PROJECTS\100109\DWG\DWG\100109_01.dwg



SDPS
Houston Storm Drainage
Program Support



PGAL
3131 BROADWAY, SUITE 200
HOUSTON, TEXAS 77002
PHONE (713) 622-1444
FAX (713) 988-8333



CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

STORM SEWER COMPUTATIONS
PROPOSED 2-YR
SHEET 1 OF 8

NBS NUMBER
M-000285-0001-4

DRAWING SCALE
NTS

CITY OF HOUSTON PM
JEFFREY T. HALL, P.E.

SHEET NO. 64 OF 385

PROJECT NAME: Garden Oaks
 JOB NUMBER: 100109
 PROJECT DESCRIPTION: Garden Oaks
 DESIGN FREQUENCY: 2 YEARS
 MEASUREMENT UNITS: English

Runoff Computations for Design Frequency.

ID	C Value	Area (acre)	Tc (min)	Tc Used (min)	Intensity (in/hr)	Total Q (cfs)
C303	0.650	0.421	23.59	23.59	4.305	1.179
C304	0.650	1.203	25.33	25.33	4.124	3.224
C305	0.650	1.203	25.46	25.46	4.111	3.447
C306	0.650	1.290	24.24	24.24	4.235	1.763
C307	0.650	0.326	23.21	23.21	4.347	0.922
C308	0.350	1.006	24.76	24.76	4.181	1.473
C309	0.350	0.549	24.00	24.00	4.261	0.819
C340	0.650	0.582	24.14	24.14	4.246	1.607
C341	0.650	0.582	26.92	26.92	3.973	4.030
C342	0.650	1.698	25.98	25.98	4.060	4.482
C343	0.650	1.644	25.91	25.91	4.067	4.347
C344	0.650	0.602	24.14	24.14	4.246	1.661
C345	0.650	0.358	23.35	23.35	4.331	1.008
C346	0.650	0.569	15.00	15.00	5.554	2.539
C347	0.650	0.703	25.03	25.03	4.154	1.970
C348	0.650	0.360	23.35	23.35	4.331	1.012
C363	0.650	0.093	21.58	21.58	4.538	0.276
C364	0.650	0.286	25.03	25.03	4.154	0.771
C365	0.650	1.525	25.77	25.77	4.081	4.044
C366	0.550	3.140	27.23	27.23	3.944	6.812
C367	0.650	0.366	23.38	23.38	4.328	1.030
C368	0.650	0.405	23.53	23.53	4.312	1.134
C393	0.650	0.804	24.62	24.62	4.195	2.193
C394	0.650	0.520	23.91	23.91	4.270	1.444
C395	0.650	0.599	24.14	24.14	4.246	1.654
C396	0.650	0.465	23.74	23.74	4.289	1.296
C397	0.650	0.562	26.80	26.80	3.983	6.634
C398	0.650	2.922	27.08	27.08	3.958	7.517
C423	0.550	7.283	29.19	29.19	3.777	15.128
C424	0.650	0.527	23.93	23.93	4.268	1.463
C425	0.650	0.437	23.64	23.64	4.299	1.220
C426	0.650	0.333	23.24	23.24	4.344	0.939
C427	0.650	0.333	26.76	26.76	3.987	6.496
C428	0.650	2.263	26.55	26.55	4.006	5.893
C452	0.650	1.144	25.24	25.24	4.133	3.074
C453	0.650	1.144	23.05	23.05	4.365	0.827
C454	0.650	0.386	23.46	23.46	4.320	1.084
C455	0.650	2.181	26.47	26.47	4.014	5.691
C456	0.650	0.293	26.57	26.57	4.004	5.969
C482	0.650	2.293	25.70	25.70	4.087	3.911
C483	0.650	0.512	23.89	23.89	4.272	1.422
C484	0.650	0.512	23.56	23.56	4.308	1.156
C485	0.650	3.774	27.63	27.63	3.909	9.590
C486	0.650	2.156	26.45	26.45	4.016	5.628
C502	0.650	0.431	23.62	23.62	4.302	1.205
C503	0.650	0.480	23.79	23.79	4.283	1.336
C504	0.650	0.595	24.13	24.13	4.247	1.644
C522	0.650	0.536	24.00	24.00	4.261	1.486
C524	0.650	0.213	22.62	22.62	4.414	0.612
C525	0.650	0.204	26.32	26.32	4.028	5.299
C526	0.650	1.786	26.08	26.08	4.051	4.703
C563	0.650	0.129	22.00	22.00	4.487	0.376

ID	C Value	Area (acre)	Tc (min)	Tc Used (min)	Intensity (in/hr)	Total Q (cfs)
C564	0.650	0.848	25.91	25.91	4.067	2.240
C565	0.650	0.162	22.87	22.87	4.385	0.462
C566	0.800	0.729	25.91	25.91	4.067	2.371
C567	0.650	0.299	23.08	23.08	4.362	0.846
C568	0.650	0.791	24.60	24.60	4.198	2.158
C569	0.550	2.829	29.50	29.50	3.752	5.837
C570	0.550	2.690	29.19	29.19	3.777	5.587
C571	0.650	1.387	25.59	25.59	4.098	3.694
C572	0.650	1.387	24.65	24.65	4.192	2.224
C573	0.650	1.461	24.46	24.46	4.212	4.000
C574	0.650	0.848	24.71	24.71	4.186	2.307
C575	0.650	0.848	25.43	25.43	4.114	1.980
C576	0.650	0.428	24.46	24.46	4.212	1.171
C577	0.650	0.533	24.46	24.46	4.212	1.459
C580	0.650	0.302	24.46	24.46	4.212	0.828
JB06	0.550	15.300	31.00	31.00	3.635	30.592
J501A	0.560	15.300	34.66	34.66	3.383	88.094
MH336B	0.560	46.500	33.30	33.30	3.472	112.968

On Grade Inlet Configuration Data

Inlet ID	Inlet Type	Inlet Length (ft)	Inlet Width (ft)	Slopes Long Trans (%)	Gutter Depth (in)	Grate Width (ft)	Grate Type	Pond Width Allowed (ft)	Critic Elev.
C24	Grate	n/a	2.48	2.40	2.00	0.015	n/a	2.48	69.279
C25	Grate	n/a	2.48	2.40	2.00	0.015	n/a	2.48	69.652
C59	Curb	5.00	n/a	0.35	2.00	0.015	0.25	n/a	71.051
C60	Curb	5.00	n/a	0.35	2.00	0.015	0.25	n/a	71.112
C65	Curb	5.00	n/a	0.35	2.00	0.015	0.25	n/a	71.322
C66	Curb	5.00	n/a	0.35	2.00	0.015	0.25	n/a	71.322
C69	Curb	5.00	n/a	0.35	2.00	0.015	0.25	n/a	71.322
C70	Curb	5.00	n/a	0.35	2.00	0.015	0.25	n/a	71.365
C71	Curb	5.00	n/a	0.35	2.00	0.015	0.25	n/a	71.365
C72	Curb	5.00	n/a	0.35	2.00	0.015	0.25	n/a	71.610
C73	Curb	5.00	n/a	0.35	2.00	0.015	0.25	n/a	71.610
C74	Curb	5.00	n/a	0.35	2.00	0.015	0.25	n/a	71.610
C75	Curb	5.00	n/a	0.64	2.00	0.015	0.25	n/a	70.984
C76	Curb	5.00	n/a	0.64	2.00	0.015	0.25	n/a	70.984
C102	Grate	n/a	2.48	0.86	2.00	0.015	n/a	2.48	69.628
C103	Grate	n/a	2.48	0.86	2.00	0.015	n/a	2.48	69.715
C104	Grate	n/a	2.48	0.86	2.00	0.015	n/a	2.48	70.738
C105	Grate	n/a	2.48	0.86	2.00	0.015	n/a	2.48	71.368
C108	Grate	n/a	2.48	0.86	2.00	0.015	n/a	2.48	70.198
C109	Grate	n/a	2.48	0.86	2.00	0.015	n/a	2.48	70.362
C110	Grate	n/a	2.48	0.86	2.00	0.015	n/a	2.48	71.420
C111	Grate	n/a	2.48	0.86	2.00	0.015	n/a	2.48	71.255
C114	Grate	n/a	2.48	0.86	2.00	0.015	n/a	2.48	71.409
C115	Grate	n/a	2.48	0.86	2.00	0.015	n/a	2.48	71.330
C116	Grate	n/a	2.48	0.86	2.00	0.015	n/a	2.48	72.192
C117	Grate	n/a	2.48	0.86	2.00	0.015	n/a	2.48	71.795
C118	Grate	n/a	2.48	0.86	2.00	0.015	n/a	2.48	69.628
C119	Grate	n/a	2.48	0.86	2.00	0.015	n/a	2.48	70.337
C120	Grate	n/a	2.48	0.86	2.00	0.015	n/a	2.48	71.007
C121	Grate	n/a	2.48	0.86	2.00	0.015	n/a	2.48	69.747
C151	Grate	n/a	2.48	0.17	2.00	0.015	n/a	2.48	70.596
C152	Grate	n/a	2.48	0.86	2.00	0.015	n/a	2.48	71.163
C153	Grate	n/a	2.48	0.86	2.00	0.015	n/a	2.48	71.774
C154	Grate	n/a	2.48	0.86	2.00	0.015	n/a	2.48	71.792
C155	Grate	n/a	2.48	0.86	2.00	0.015	n/a	2.48	70.795
C156	Grate	n/a	2.48	0.86	2.00	0.015	n/a	2.48	71.478
C157	Grate	n/a	2.48	0.86	2.00	0.015	n/a	2.48	72.110
C158	Grate	n/a	2.48	0.86	2.00	0.015	n/a	2.48	72.030
C159	Grate	n/a	2.48	0.86	2.00	0.015	n/a	2.48	71.478
C160	Grate	n/a	2.48	0.86	2.00	0.015	n/a	2.48	71.082
C161	Grate	n/a	2.48	0.86	2.00	0.015	n/a	2.48	71.077
C196	Grate	n/a	2.48	0.86	2.00	0.015	n/a	2.48	72.242
C191	Grate	n/a	2.48	1.32	2.00	0.015	n/a	2.48	71.466
C192	Grate	n/a	2.48	1.32	2.00	0.015	n/a	2.48	71.886
C193	Grate	n/a	2.48	1.32	2.00	0.015	n/a	2.48	72.718
C194	Grate	n/a	2.48	1.32	2.00	0.015	n/a	2.48	72.573
C195	Grate	n/a	2.48	1.32	2.00	0.015	n/a	2.48	72.566
C196	Grate	n/a	2.48	1.32	2.00	0.015	n/a	2.48	72.460
C197	Grate	n/a	2.48	0.41	2.00	0.015	n/a	2.48	72.499
C198	Grate	n/a	2.48	1.11	2.00	0.015	n/a	2.48	72.317
C201	Grate	n/a	2.48	0.69	2.00	0.015	n/a	2.48	71.834
C200	Grate	n/a	2.48	0.69	2.00	0.015	n/a	2.48	71.852
C201	Grate	n/a	2.48	0.69	2.00	0.015	n/a	2.48	72.759
C202	Grate	n/a	2.48	0.69	2.00	0.015	n/a	2.48	72.605
C203	Grate	n/a	2.48	0.69	2.00	0.015	n/a	2.48	72.289
C265	Grate	n/a	2.48	0.13	2.00	0.015	n/a	2.48	73.524
C266	Grate	n/a	2.48	0.13	2.00	0.015	n/a	2.48	73.524
C267	Grate	n/a	2.48	0.19	2.00	0.015	n/a	2.48	73.191
C268	Grate	n/a	2.48	0.40	2.00	0.015	n/a	2.48	73.896
C269	Curb	5.00	n/a	0.69	2.00	0.015	0.25	n/a	73.190
C270	Curb	5.00	n/a	0.69	2.00	0.015	0.25	n/a	73.200

DATE: 08/08/2014 11:53 AM
 P:\PROJECTS\100109\DWG\DWG\100109_01.dwg



SDPS
Houston Storm Drainage
Program Support



PGAL
Professional Geotechnical Associates, L.P.
3311 BRADSHAW, SUITE 200
HOUSTON, TEXAS 77042
PHONE (713) 822-1444
FAX (713) 968-9333



CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND
SHEPHERD PARK (CENTRAL)
DRAINAGE AND PAVING

STORM SEWER
COMPUTATIONS
PROPOSED 2-YR
SHEET 2 OF 8

NBS NUMBER
M-000285-0001-4

DRAWING SCALE

NTS

CITY OF HOUSTON PM
JEFFREY T. HALL, P.E.

SHEET NO. 65 OF 385

PROJECT NAME: Garden Oaks
 JOB NUMBER: 100109
 PROJECT DESCRIPTION: Garden Oaks
 DESIGN FREQUENCY: 2 YEARS
 MEASUREMENT UNITS: English

On Grade Inlet Configuration Data

Inlet ID	Inlet Type	Inlet Length (ft)	Inlet Length (sq-ft)	Slopes Long (%)	Trans n	Gutter Depr. (ft)	Grate Width (ft)	Pond Allowed (ft)	Critic Elev. (ft)		
C298	Grate	n/a	2.48	1.49	2.00	0.015	n/a	2.48	Parall	12.00	74.535
C299	Grate	n/a	2.48	0.69	2.00	0.015	n/a	2.48	Parall	12.00	73.460
C300	Grate	n/a	2.48	2.81	2.00	0.015	n/a	2.48	Parall	12.00	74.063
C301	Grate	n/a	2.48	1.14	2.00	0.015	n/a	2.48	Parall	12.00	74.202
C306	Grate	n/a	2.48	3.35	2.00	0.015	n/a	2.48	Parall	12.00	72.909
C307	Grate	n/a	2.48	3.34	2.00	0.015	n/a	2.48	Parall	12.00	73.608
C346	Curb	5.00	n/a	0.35	2.00	0.015	0.25	n/a	n/a	13.50	74.092
C347	Curb	5.00	n/a	0.35	2.00	0.015	0.25	n/a	n/a	13.50	74.685
C365	Grate	n/a	2.48	4.32	2.00	0.015	n/a	2.48	Parall	13.50	74.764
C366	Grate	n/a	2.48	4.31	2.00	0.015	n/a	2.48	Parall	13.50	74.681
C397	Grate	n/a	2.48	2.07	2.00	0.015	n/a	2.48	Parall	13.50	73.725
C398	Grate	n/a	2.48	6.50	2.00	0.015	n/a	2.48	Parall	13.50	73.983
C427	Grate	n/a	2.48	1.94	2.00	0.015	n/a	2.48	Parall	13.50	73.869
C428	Grate	n/a	2.48	1.94	2.00	0.015	n/a	2.48	Parall	13.50	74.059
C455	Grate	n/a	2.48	3.00	2.00	0.015	n/a	2.48	Parall	12.00	74.185
C456	Grate	n/a	2.48	3.00	2.00	0.015	n/a	2.48	Parall	12.00	75.039
C485	Grate	n/a	2.48	3.70	2.00	0.015	n/a	2.48	Parall	13.50	74.128
C486	Grate	n/a	2.48	3.70	2.00	0.015	n/a	2.48	Parall	13.50	74.203
C525	Grate	n/a	2.48	3.33	2.00	0.015	n/a	2.48	Parall	12.00	74.131
C526	Grate	n/a	2.48	3.33	2.00	0.015	n/a	2.48	Parall	12.00	74.661

Sag Inlets Configuration Data

Inlet ID	Inlet Type	Length (ft)	Perim. (ft)	Grate Area (sf)	Slopes Long (%)	Trans n	Gutter Depr. (ft)	Pond Allowed (ft)	Critic Elev. (ft)			
C1	Curb	5.00	n/a	n/a	1.00	0.35	2.00	0.015	1.50	0.50	12.00	72.242
C26	Curb	5.00	n/a	n/a	0.35	1.00	2.00	0.015	1.50	0.50	12.00	70.251
C27	Curb	5.00	n/a	n/a	0.35	1.00	2.00	0.015	1.50	0.50	12.00	70.250
C28	Curb	5.00	n/a	n/a	1.00	0.35	2.00	0.015	1.50	0.50	12.00	70.251
C29	Curb	5.00	n/a	n/a	1.00	0.35	2.00	0.015	1.50	0.50	12.00	70.251
C47	Curb	5.00	n/a	n/a	0.35	1.00	2.00	0.015	1.50	0.50	12.00	70.250
C58	Curb	5.00	n/a	n/a	0.35	1.00	2.00	0.015	1.50	0.50	12.00	70.003
C61	Curb	5.00	n/a	n/a	0.86	0.35	2.00	0.015	1.50	0.50	12.00	71.100
C62	Curb	5.00	n/a	n/a	1.00	0.35	2.00	0.015	1.50	0.50	12.00	71.100
C63	Curb	5.00	n/a	n/a	1.00	0.35	2.00	0.015	1.50	0.50	12.00	70.160
C64	Curb	5.00	n/a	n/a	1.00	0.35	2.00	0.015	1.50	0.50	12.00	70.160
C67	Curb	5.00	n/a	n/a	0.35	1.00	2.00	0.015	1.50	0.50	12.00	71.100
C68	Curb	5.00	n/a	n/a	0.35	1.00	2.00	0.015	1.50	0.50	12.00	70.910
C100	Curb	5.00	n/a	n/a	1.00	0.35	2.00	0.015	1.50	0.50	12.00	70.560
C101	Curb	5.00	n/a	n/a	1.00	0.35	2.00	0.015	1.50	0.50	12.00	70.560
C106	Curb	5.00	n/a	n/a	1.00	0.35	2.00	0.015	1.50	0.50	12.00	70.473
C107	Curb	5.00	n/a	n/a	1.00	0.35	2.00	0.015	1.50	0.50	12.00	70.470
C112	Grate	n/a	9.92	3.52	1.00	0.35	2.00	0.015	n/a	0.50	12.00	71.171
C113	Grate	n/a	9.92	3.52	1.00	0.35	2.00	0.015	n/a	0.50	12.00	70.716
C147	Curb	5.00	n/a	n/a	0.35	1.00	2.00	0.015	1.50	0.50	12.00	71.050
C148	Curb	5.00	n/a	n/a	0.35	1.00	2.00	0.015	1.50	0.50	12.00	71.049
C149	Curb	5.00	n/a	n/a	1.00	0.35	2.00	0.015	1.50	0.50	12.00	71.040
C150	Curb	5.00	n/a	n/a	1.00	0.35	2.00	0.015	1.50	0.50	12.00	71.040
C187	Curb	5.00	n/a	n/a	0.35	1.00	2.00	0.015	1.50	0.50	12.00	72.250
C188	Curb	5.00	n/a	n/a	0.35	1.00	2.00	0.015	1.50	0.50	12.00	72.250
C189	Curb	5.00	n/a	n/a	1.00	0.35	2.00	0.015	1.50	0.50	12.00	72.300
C190	Curb	5.00	n/a	n/a	1.00	0.35	2.00	0.015	1.50	0.50	12.00	72.300
C224	Curb	5.00	n/a	n/a	1.13	1.00	2.00	0.015	1.50	0.50	12.00	72.764
C225	Curb	10.00	n/a	n/a	1.13	1.00	2.00	0.015	1.50	0.50	12.00	72.765
C226	Curb	5.00	n/a	n/a	0.69	1.00	2.00	0.015	1.50	0.50	12.00	72.651
C227	Curb	5.00	n/a	n/a	1.00	0.69	2.00	0.015	1.50	0.50	12.00	72.651
C257	Curb	5.00	n/a	n/a	0.35	0.75	2.00	0.015	1.50	0.50	12.00	73.490
C258	Curb	5.00	n/a	n/a	2.00	1.13	2.00	0.015	1.50	0.50	12.00	74.293
C259	Curb	5.00	n/a	n/a	3.13	2.00	2.00	0.015	1.50	0.50	12.00	72.503
C260	Curb	5.00	n/a	n/a	0.35	1.33	2.00	0.015	1.50	0.50	12.00	73.581
C262	Grate	n/a	9.92	3.52	1.89	1.66	2.00	0.015	n/a	0.50	12.00	73.152
C264	Grate	n/a	9.92	3.52	0.35	0.35	2.00	0.015	n/a	0.50	12.00	73.159
C296	Curb	5.00	n/a	n/a	0.35	1.00	2.00	0.015	1.50	0.50	12.00	73.270
C297	Curb	5.00	n/a	n/a	0.35	1.00	2.00	0.015	1.50	0.50	12.00	73.270
C302	Curb	5.00	n/a	n/a	0.35	0.55	2.00	0.015	1.50	0.50	12.00	73.790
C303	Curb	5.00	n/a	n/a	0.35	1.00	2.00	0.015	1.50	0.50	12.00	73.740
C304	Curb	5.00	n/a	n/a	0.35	0.55	2.00	0.015	1.50	0.50	12.00	73.792
C305	Curb	5.00	n/a	n/a	0.35	0.55	2.00	0.015	1.50	0.50	12.00	73.790
C340	Curb	5.00	n/a	n/a	0.35	0.40	2.00	0.015	1.50	0.50	12.00	75.192
C341	Curb	5.00	n/a	n/a	0.35	0.40	2.00	0.015	1.50	0.50	13.50	73.586
C342	Curb	5.00	n/a	n/a	0.35	1.00	2.00	0.015	1.50	0.50	12.00	74.848
C343	Curb	5.00	n/a	n/a	0.66	1.00	2.00	0.015	1.50	0.50	12.00	73.634
C344	Curb	5.00	n/a	n/a	0.40	1.00	2.00	0.015	1.50	0.50	12.00	75.231
C345	Curb	5.00	n/a	n/a	0.35	1.00	2.00	0.015	1.50	0.50	12.00	75.231
C348	Curb	5.00	n/a	n/a	1.00	0.35	2.00	0.015	1.50	0.50	12.00	75.391
C362	Curb	5.00	n/a	n/a	0.51	0.47	2.00	0.015	1.50	0.50	12.00	75.240
C363	Curb	5.00	n/a	n/a	0.51	0.47	2.00	0.015	1.50	0.50	12.00	75.240
C364	Curb	5.00	n/a	n/a	1.00	0.35	2.00	0.015	1.50	0.50	12.00	74.740
C367	Curb	5.00	n/a	n/a	0.51	0.47	2.00	0.015	1.50	0.50	12.00	75.092
C368	Curb	5.00	n/a	n/a	0.51	0.47	2.00	0.015	1.50	0.50	12.00	75.092
C393	Curb	5.00	n/a	n/a	0.35	1.00	2.00	0.015	1.50	0.50	12.00	74.740
C394	Curb	5.00	n/a	n/a	0.61	1.00	2.00	0.015	1.50	0.50	12.00	74.740
C395	Curb	5.00	n/a	n/a	0.35	1.00	2.00	0.015	1.50	0.50	12.00	74.540
C396	Curb	5.00	n/a	n/a	1.00	0.35	2.00	0.015	1.50	0.50	12.00	74.530
C423	Grate	n/a	9.92	8.28	0.35	0.35	2.00	0.015	n/a	1.00	13.50	73.671
C424	Curb	5.00	n/a	n/a	0.35	1.00	2.00	0.015	1.50	0.50	12.00	75.230
C425	Curb	5.00	n/a	n/a	1.00	0.35	2.00	0.015	1.50	0.50	12.00	75.071
C426	Curb	5.00	n/a	n/a	1.00	0.35	2.00	0.015	1.50	0.50	12.00	75.072
C432	Curb	5.00	n/a	n/a	0.35	1.00	2.00	0.015	1.50	0.50	12.00	74.890
C433	Curb	5.00	n/a	n/a	0.35	1.00	2.00	0.015	1.50	0.50	12.00	74.890
C434	Curb	5.00	n/a	n/a	0.35	1.00	2.00	0.015	1.50	0.50	12.00	74.890
C435	Curb	5.00	n/a	n/a	0.35	1.00	2.00	0.015	1.50	0.50	12.00	74.890
C436	Curb	5.00	n/a	n/a	0.35	1.00	2.00	0.015	1.50	0.50	12.00	74.890
C437	Curb	5.00	n/a	n/a	0.35	1.00	2.00	0.015	1.50	0.50	12.00	74.890
C438	Curb	5.00	n/a	n/a	0.35	1.00	2.00	0.015	1.50	0.50	12.00	74.890
C439	Curb	5.00	n/a	n/a	0.35	1.00	2.00	0.015	1.50	0.50	12.00	74.890
C440	Curb	5.00	n/a	n/a	0.35	1.00	2.00	0.015	1.50	0.50	12.00	74.890
C441	Curb	5.00	n/a	n/a	0.35	1.00	2.00	0.015	1.50	0.50	12.00	74.890
C442	Curb	5.00	n/a	n/a	0.35	1.00	2.00	0.015	1.50	0.50	12.00	74.890
C443	Curb	5.00	n/a	n/a	0.35	1.00	2.00	0.015	1.50	0.50	12.00	74.890
C444	Curb	5.00	n/a	n/a	0.35	1.00	2.00	0.015	1.50	0.50	12.00	74.890
C445	Curb	5.00	n/a	n/a	0.35	1.00	2.00	0.015	1.50	0.50	12.00	74.890
C446	Curb	5.00	n/a	n/a	0.35	1.00	2.00	0.015	1.50	0.50	12.00	74.890
C447	Curb	5.00	n/a	n/a	0.35	1.00	2.00	0.015	1.50	0.50	12.00	74.890
C448	Curb	5.00	n/a	n/a	0.35	1.00	2.00	0.015	1.50	0.50	12.00	74.890
C449	Curb	5.00	n/a	n/a	0.35	1.00	2.00	0.015	1.50	0.50	12.00	74.890
C450	Curb	5.00	n/a	n/a	0.35	1.00	2.00	0.015	1.50	0.50	12.00	74.890
C451	Curb	5.00	n/a	n/a	0.35	1.00	2.00	0.015	1.50	0.50	12.00	74.890
C452	Curb	5.00	n/a	n/a	0.35							

GEOPAK 2000 Drainage (STORM DRAIN DESIGN)

Run # 08/08/2014 11:53

PROJECT NAME: Garden Oaks
JOB NUMBER: 1001094
PROJECT DESCRIPTION: Garden Oaks
DESIGN FREQUENCY: 2 YEARS
MEASUREMENT UNITS: English

Sag Inlet Computation Data

Table with columns: Inlet ID, Inlet Type, Length (ft), Grate Perim. (ft), Area (sf), Total Q (cfs), Inlet Capacity (cfs), Total Head (ft), Ponded Left (ft), Right (ft). Lists inlet details for various curb and grate types.

Cumulative Junction Discharge Computations

Table with columns: Node I.D., Node Type, Weighted C-Value, Cumulat. Dr. Area (acre), Cumulat. TC (min), Intens. (in/hr), User Supply Q (cfs), Additional Q in Node (cfs), Total Disch. (cfs). Shows cumulative discharge data for nodes 808 through 424.

Cumulative Junction Discharge Computations

Table with columns: Node I.D., Node Type, Weighted C-Value, Cumulat. Dr. Area (acre), Cumulat. TC (min), Intens. (in/hr), User Supply Q (cfs), Additional Q in Node (cfs), Total Disch. (cfs). Continuation of cumulative discharge data for nodes 808 through 103.

DATE: 04/20/09 6:58:38 AM
DRAWINGS CHECKED: DONALD WILSON/ENR/04/20/09

SDPS Houston Storm Drainage Program Support
PGAL
CITY OF HOUSTON DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING
STORM SEWER COMPUTATIONS PROPOSED 2-YR SHEET 4 OF 8
WBS NUMBER M-000285-0001-4
DRAWING SCALE NTS
55630
CITY OF HOUSTON PM
JEFFREY T. HALL, P. E.
SHEET NO. 67 OF 385

PROJECT NAME: Garden Oaks
JOB NUMBER: 1001094
PROJECT DESCRIPTION: Garden Oaks
DESIGN FREQUENCY: 2 YEARS
MEASUREMENT UNITS: English

Cumulative Junction Discharge Computations

Table with columns: Node I.D., Node Type, Weighted C-Value, Cumul. Dr. Area (acres), Cumul. Tc (min), Intens. (in/hr), User Supply Q (cfs), Additional Q in Node (cfs), Total Disch. (cfs). Rows include nodes C425 through M481.

Cumulative Junction Discharge Computations

Table with columns: Node I.D., Node Type, Weighted C-Value, Cumul. Dr. Area (acres), Cumul. Tc (min), Intens. (in/hr), User Supply Q (cfs), Additional Q in Node (cfs), Total Disch. (cfs). Rows include nodes MH00 through OUF.

Conveyance Configuration Data

Table with columns: Run #, Node I.D., DS, Flowline Elev. (ft), Shap #, Spa Rise (ft), Hyd. Length (ft), Pipe Slope (%), n, v. Rows include runs 21 through 152.

DATE: 8/8/2014 11:53 AM
CADD: M
PROJECT: 1001094
DRAWING: 55630

SDPS Houston Storm Drainage Program Support
PGAL
CITY OF HOUSTON DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING
STORM SEWER COMPUTATIONS SHEET 5-2R SHEET 5 OF 8
WDS NUMBER M-000285-0001-4
DRAWING SCALE NTS
CITY OF HOUSTON PM JEFFREY T. HALL, P.E.
SHEET NO. 68 OF 385

PROJECT NAME: Garden Oaks
 JOB NUMBER: 100109
 PROJECT DESCRIPTION: Garden Oaks
 DESIGN FREQUENCY: 2 Years
 MEASUREMENT UNITS: English

Conveyance Configuration Data

Run #	Node I.D.	DS	Flowline Elev. US (ft)	Flowline Elev. DS (ft)	Shap #	Spa Rise (ft)	Hyd. Length (ft)	Pipe Slope (%)	n	value	
153	C153	MH144	66.480	66.320	24	Inch DI	1 n/a	2.00	36.04	0.49	0.013
154	C154	C149	67.130	66.680	24	Inch DI	1 n/a	2.00	59.57	0.81	0.013
155	C155	C150	64.190	63.920	24	Inch DI	1 n/a	2.00	57.34	0.50	0.013
156	C156	MH145	66.940	66.520	24	Inch DI	1 n/a	2.00	6.70	0.58	0.013
157	C157	MH146	67.680	67.520	24	Inch DI	1 n/a	2.00	36.03	0.49	0.013
158	C158	MH146	67.540	67.520	24	Inch DI	1 n/a	2.00	7.29	0.49	0.013
159	C159	MH143	65.550	65.390	24	Inch DI	1 n/a	2.00	34.65	0.51	0.013
160	C160	MH143	65.420	65.390	24	Inch DI	1 n/a	2.00	9.72	0.46	0.013
161	C161	MH144	66.340	66.320	24	Inch DI	1 n/a	2.00	6.66	0.58	0.013
162	C162	MH145	67.090	66.920	24	Inch DI	1 n/a	2.00	38.31	0.49	0.013
170	MH170	MH171	64.610	64.300	30	Inch DI	1 n/a	2.50	92.95	0.35	0.013
171	MH171	MH172	64.300	63.950	30	Inch DI	1 n/a	2.50	104.68	0.35	0.013
172	MH172	MH181	64.000	63.900	30	Inch DI	1 n/a	2.50	53.48	0.36	0.013
173	MH173	MH185	66.770	65.990	30	Inch DI	1 n/a	2.50	225.54	0.35	0.013
174	MH174	MH173	67.220	66.770	30	Inch DI	1 n/a	2.50	133.98	0.35	0.013
175	MH180	MH180	67.050	67.050	30	Inch DI	1 n/a	2.50	523.00	0.08	0.013
181	MH181	MH180	63.810	63.670	30	Inch DI	1 n/a	2.50	46.95	0.33	0.013
182	MH182	MH170	65.210	64.610	30	Inch DI	1 n/a	2.50	173.79	0.35	0.013
183	MH183	MH180	63.560	63.300	30	Inch DI	1 n/a	2.50	56.42	0.50	0.013
184	MH184	MH183	64.080	63.830	30	Inch DI	1 n/a	2.50	76.53	0.35	0.013
185	MH185	MH186	65.990	65.220	30	Inch DI	1 n/a	2.50	187.53	0.42	0.013
186	MH186	MH184	64.000	64.000	30	Inch DI	1 n/a	2.50	363.72	0.32	0.013
187	C187	MH181	64.400	64.310	24	Inch DI	1 n/a	2.00	21.26	0.50	0.013
188	C188	MH181	64.340	64.310	24	Inch DI	1 n/a	2.00	8.25	0.60	0.013
189	C189	MH183	64.330	64.330	24	Inch DI	1 n/a	2.00	8.25	0.60	0.013
190	C190	MH183	64.360	64.330	24	Inch DI	1 n/a	2.00	8.76	0.54	0.013
191	C191	MH186	65.830	65.720	24	Inch DI	1 n/a	2.00	33.23	0.37	0.013
192	C192	MH185	65.750	65.720	24	Inch DI	1 n/a	2.00	8.95	0.37	0.013
193	C193	MH185	66.610	66.490	24	Inch DI	1 n/a	2.00	36.87	0.36	0.013
194	C194	MH173	67.250	67.240	24	Inch DI	1 n/a	2.00	6.65	0.29	0.013
195	C195	MH174	66.810	66.720	24	Inch DI	1 n/a	2.00	34.71	0.44	0.013
196	C196	MH174	67.750	67.720	24	Inch DI	1 n/a	2.00	9.29	0.50	0.013
197	C197	MH182	65.870	65.710	24	Inch DI	1 n/a	2.00	34.46	0.51	0.013
198	C198	MH182	65.730	65.710	24	Inch DI	1 n/a	2.00	7.18	0.44	0.013
199	C199	C187	64.520	64.400	24	Inch DI	1 n/a	2.00	39.23	0.34	0.013
200	C200	MH171	64.820	64.800	24	Inch DI	1 n/a	2.00	6.53	0.61	0.013
201	C201	C189	64.840	64.420	24	Inch DI	1 n/a	2.00	42.82	0.06	0.013
202	C202	MH184	64.610	64.580	24	Inch DI	1 n/a	2.00	8.82	0.54	0.013
203	C203	MH172	64.460	64.450	24	Inch DI	1 n/a	2.00	31.58	0.43	0.013
220	MH220	MH220	57.700	57.670	12ft x 10ft	112.0010.00	36.22	0.09	0.015		
223	MH223	MH221	57.760	57.700	10ft x 10ft	110.0010.00	80.30	0.08	0.015		
224	C224	MH220	64.440	64.430	24	Inch DI	1 n/a	2.00	8.69	0.18	0.013
225	C225	MH220	64.530	64.480	24	Inch DI	1 n/a	2.00	22.22	0.26	0.013
226	C226	MH223	65.820	65.800	24	Inch DI	1 n/a	2.00	7.78	0.25	0.013
227	C227	MH250	65.110	65.000	30	Inch DI	1 n/a	2.50	52.19	0.23	0.013
241	MH240	MH250	65.000	64.860	30	Inch DI	1 n/a	2.50	75.10	0.20	0.013
242	MH241	MH253	65.820	65.790	24	Inch DI	1 n/a	2.00	317.62	0.22	0.013
254	MH254	MH240	65.200	65.110	30	Inch DI	1 n/a	2.50	49.78	0.20	0.013
255	MH255	MH256	66.260	65.630	30	Inch DI	1 n/a	2.50	317.62	0.20	0.013
256	MH256	MH254A	65.630	65.630	30	Inch DI	1 n/a	2.50	130.88	0.20	0.013
257	C257	MH253	66.040	65.820	24	Inch DI	1 n/a	2.00	7.75	4.89	0.013
258	C258	MH253	66.120	65.820	24	Inch DI	1 n/a	2.00	7.75	4.89	0.013
259	C259	MH250	65.820	65.000	30	Inch DI	1 n/a	2.50	21.76	0.65	0.013
260	C260	MH250	65.570	65.520	24	Inch DI	1 n/a	2.00	7.75	1.56	0.013
261	C261	MH254	65.730	65.700	24	Inch DI	1 n/a	2.00	11.38	0.37	0.013
262	C262	MH254	66.780	66.760	24	Inch DI	1 n/a	2.00	9.44	0.32	0.013
264	C264	MH256	66.140	66.130	24	Inch DI	1 n/a	2.00	7.88	0.22	0.013
265	C265	MH240	65.620	65.610	24	Inch DI	1 n/a	2.00	5.68	0.41	0.013
266	C266	C257	65.300	65.040	24	Inch DI	1 n/a	2.00	54.80	0.51	0.013
267	C267	MH256	69.140	68.970	24	Inch DI	1 n/a	2.00	16.82	0.22	0.013
268	C268	MH256	69.580	69.470	24	Inch DI	1 n/a	2.00	34.28	0.35	0.013
269	C269	808	64.630	64.600	24	Inch DI	1 n/a	2.00	8.33	0.59	0.013
270	C270	810	64.690	64.600	24	Inch DI	1 n/a	2.00	21.17	0.50	0.013
290	MH290	MH290	58.190	58.050	10ft x 10ft	110.0010.00	181.67	0.08	0.015		
291	MH291	MH290	65.190	64.970	24	Inch DI	1 n/a	2.00	48.04	0.50	0.013
294	MH294	MH290	59.940	59.770	36	Inch DI	1 n/a	3.00	115.15	0.29	0.013
295	MH295	MH294	64.160	63.140	36	Inch DI	1 n/a	3.00	293.24	0.35	0.013
296	C296	MH291	65.150	65.120	24	Inch DI	1 n/a	2.00	8.25	0.60	0.013
297	C297	MH291	65.210	65.120	24	Inch DI	1 n/a	2.00	21.26	0.50	0.013
298	C298	C307	65.850	65.320	24	Inch DI	1 n/a	2.00	154.48	0.35	0.013
299	C299	C298	68.470	68.350	24	Inch DI	1 n/a	2.00	45.57	0.28	0.013
300	C300	C301	69.110	69.000	24	Inch DI	1 n/a	2.00	42.43	0.28	0.013
301	C301	C298	66.500	65.850	24	Inch DI	1 n/a	2.00	188.47	0.35	0.013
302	C302	MH294	64.170	64.140	24	Inch DI	1 n/a	2.00	8.04	0.63	0.013
303	C303	MH294	64.230	64.140	24	Inch DI	1 n/a	2.00	27.03	0.49	0.013
304	C304	MH295	65.190	65.160	24	Inch DI	1 n/a	2.00	8.82	0.54	0.013
305	C305	MH295	65.250	65.160	24	Inch DI	1 n/a	2.00	20.79	0.51	0.013
306	C306	MH295	65.390	65.190	24	Inch DI	1 n/a	2.00	6.12	0.43	0.013
307	C307	C297	65.320	65.210	24	Inch DI	1 n/a	2.00	26.51	0.48	0.013
308	C308	MH330	62.410	62.330	24	Inch DI	1 n/a	2.00	23.61	0.37	0.013
309	C309	MH330	62.420	62.330	24	Inch DI	1 n/a	2.00	26.22	0.37	0.013
330	MH330	MH290	58.450	58.190	10ft x 10ft	110.0010.00	133.05	0.08	0.015		
331	MH331	MH330	68.550	68.450	10ft x 8ft	110.0010.00	123.56	0.08	0.015		
332	MH332	J804	64.010	64.340	10ft x 8ft	110.0010.00	56.97	0.08	0.015		
336	MH336	MH335	60.560	60.510	3ft x 5ft	1.500	5.00	38.31	0.15	0.015	
341	C341	MH335	63.821	63.760	24	Inch DI	1 n/a	2.00	23.52	0.35	0.013
342	C342	MH336	62.780	62.690	24	Inch DI	1 n/a	2.00	8.00	0.42	0.013
343	C343	MH336	62.710	62.690	24	Inch DI	1 n/a	2.00	8.00	0.42	0.013
344	C344	MH346	64.130	64.130	24	Inch DI	1 n/a	2.00	23.36	0.30	0.013
345	C345	MH346	64.140	64.130	24	Inch DI	1 n/a	2.00	6.12	0.35	0.013
346	MH346	MH335	59.380	59.010	10ft x 8ft	110.008.000	462.15	0.08	0.015		
360	MH360	J804	62.610	62.450	8ft x 8ft	8.000	202.52	0.08	0.015		
361	MH361	MH350	64.010	64.340	10ft x 8ft	110.008.000	79.65	0.08	0.015		
362	C362	MH360	64.360	64.340	24	Inch DI	1 n/a	2.00	8.36	0.39	0.013
363	C363	MH361	68.250	68.130	24	Inch DI	1 n/a	2.00	23.99	0.34	0.013
364	C364	MH361	68.300	68.230	24	Inch DI	1 n/a	2.00	23.99	0.34	0.013
365	C365	MH361	73.850	70.750	24	Inch DI	1 n/a	2.00	52.00	0.36	0.013
366	C366	C364	68.330	68.330	24	Inch DI	1 n/a	2.00	52.00	0.36	0.013
367	C367	MH369	68.330	68.330	24	Inch DI	1 n/a	2.00	21.48	0.45	0.013
368	C368	MH369	64.460	64.440	24	Inch DI	1 n/a	2.00	8.32	0.40	0.013
369	MH369	MH360	62.710	62.710	8ft x 5ft	1.500	126.00	0.08	0.015		
390	MH390	MH360	62.710	62.710	8ft x 5ft	1.500	281.50	0.08	0.015		
391	MH391	MH390	64.910	64.660	24	Inch DI	1 n/a	2.00	55.58	0.49	0.013
392	MH392	MH390	64.877	64.660	24	Inch DI	1 n/a	2.00	47.39	0.50	0.013

Conveyance Configuration Data

Run #	Node I.D.	DS	Flowline Elev. US (ft)	Flowline Elev. DS (ft)	Shap #	Spa Rise (ft)	Hyd. Length (ft)	Pipe Slope (%)	n	value	
393	MH391	MH391	65.000	64.910	24	Inch DI	1 n/a	2.00	20.68	0.52	0.013

PROJECT NAME: Garden Oaks
JOB NUMBER: 100109
PROJECT DESCRIPTION: Garden Oaks
DESIGN FREQUENCY: 2 YEARS
MEASUREMENT UNITS: English

Conveyance Hydraulic Computations. Tailwater = 65.680(ft)

Table with columns: Run #, Hydraulic DS Ele (ft), Graded DS Ele (ft), Frict. Slope (%), Depth (ft), Velocity (ft/s), Q (cfs), Cap (cfs), and Junc Loss (ft). Contains 265 rows of data.

Conveyance Hydraulic Computations. Tailwater = 65.680(ft)

Table with columns: Run #, Hydraulic DS Ele (ft), Graded DS Ele (ft), Frict. Slope (%), Depth (ft), Velocity (ft/s), Q (cfs), Cap (cfs), and Junc Loss (ft). Contains 265 rows of data.

DATE: 8/20/2014 8:04 AM
DRAWN BY: CAD/CADD/DRN/DOAN/DAVIDSON/DLW/MSD/STP



CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

STORM SEWER COMPUTATIONS PROPOSED 2-YR SHEET 7 OF 8

WBS NUMBER: M-000285-0001-4
DRAWING SCALE: NTS
CITY OF HOUSTON PW
JEFFREY T. HALL, P.E.
SHEET NO. 70 OF 385

55630

PROJECT NAME: Garden Oaks
 JOB NUMBER: 100109
 PROJECT DESCRIPTION: Garden Oaks
 DESIGN FREQUENCY: 2 YEARS
 MEASUREMENT UNITS: English

Warning Messages for current project:

Runoff Frequency of 2 YEARS

Computed ponded width exceeds allowable width at inlet Id= C151	Run# 109	Supercritical flow
Computed ponded width exceeds allowable width at inlet Id= C195	Run# 115	Supercritical flow
Computed ponded width exceeds allowable width at inlet Id= C197	Run# 118	Supercritical flow
Computed ponded width exceeds allowable width at inlet Id= C199	Run# 119	Supercritical flow
Computed ponded width exceeds allowable width at inlet Id= C267	Run# 120	Supercritical flow
Capacity of grade inlet exceeded at inlet Id= C24 (bypass to C27)	Run# 147	Supercritical flow
Capacity of grade inlet exceeded at inlet Id= C25	Run# 148	Supercritical flow
Capacity of grade inlet exceeded at inlet Id= C59 (bypass to C71)	Run# 149	Supercritical flow
Capacity of grade inlet exceeded at inlet Id= C60 (bypass to C71)	Run# 150	Supercritical flow
Capacity of grade inlet exceeded at inlet Id= C65 (bypass to C67)	Run# 152	Supercritical flow
Capacity of grade inlet exceeded at inlet Id= C66 (bypass to C68)	Run# 153	Supercritical flow
Capacity of grade inlet exceeded at inlet Id= C71 (bypass to C58)	Run# 154	Supercritical flow
Capacity of grade inlet exceeded at inlet Id= C72 (bypass to C47)	Run# 155	Supercritical flow
Capacity of grade inlet exceeded at inlet Id= C73 (bypass to C65)	Run# 156	Supercritical flow
Capacity of grade inlet exceeded at inlet Id= C74 (bypass to C66)	Run# 157	Supercritical flow
Capacity of grade inlet exceeded at inlet Id= C75 (bypass to C73)	Run# 158	Supercritical flow
Capacity of grade inlet exceeded at inlet Id= C76 (bypass to C74)	Run# 159	Supercritical flow
Capacity of grade inlet exceeded at inlet Id= C102 (bypass to C120)	Run# 160	Supercritical flow
Capacity of grade inlet exceeded at inlet Id= C103 (bypass to C121)	Run# 161	Supercritical flow
Capacity of grade inlet exceeded at inlet Id= C104 (bypass to C102)	Run# 162	Supercritical flow
Capacity of grade inlet exceeded at inlet Id= C105 (bypass to C103)	Run# 187	Supercritical flow
Capacity of grade inlet exceeded at inlet Id= C108 (bypass to C110)	Run# 188	Supercritical flow
Capacity of grade inlet exceeded at inlet Id= C109 (bypass to C111)	Run# 189	Supercritical flow
Capacity of grade inlet exceeded at inlet Id= C110 (bypass to C112)	Run# 190	Supercritical flow
Capacity of grade inlet exceeded at inlet Id= C111 (bypass to C113)	Run# 195	Supercritical flow
Capacity of grade inlet exceeded at inlet Id= C114 (bypass to C116)	Run# 196	Supercritical flow
Capacity of grade inlet exceeded at inlet Id= C115 (bypass to C117)	Run# 197	Supercritical flow
Capacity of grade inlet exceeded at inlet Id= C116	Run# 200	Supercritical flow
Capacity of grade inlet exceeded at inlet Id= C117	Run# 201	Supercritical flow
Capacity of grade inlet exceeded at inlet Id= C118	Run# 202	Supercritical flow
Capacity of grade inlet exceeded at inlet Id= C119	Run# 257	Supercritical flow
Capacity of grade inlet exceeded at inlet Id= C120	Run# 258	Supercritical flow
Capacity of grade inlet exceeded at inlet Id= C121	Run# 259	Supercritical flow
Capacity of grade inlet exceeded at inlet Id= C151	Run# 260	Supercritical flow
Capacity of grade inlet exceeded at inlet Id= C152	Run# 269	Supercritical flow
Capacity of grade inlet exceeded at inlet Id= C153	Run# 296	Supercritical flow
Capacity of grade inlet exceeded at inlet Id= C154	Run# 302	Supercritical flow
Capacity of grade inlet exceeded at inlet Id= C155	Run# 303	Supercritical flow
Capacity of grade inlet exceeded at inlet Id= C156	Run# 304	Supercritical flow
Capacity of grade inlet exceeded at inlet Id= C157	Run# 305	Supercritical flow
Capacity of grade inlet exceeded at inlet Id= C158	Run# 306	Supercritical flow
Capacity of grade inlet exceeded at inlet Id= C159	Run# 342	Supercritical flow
Capacity of grade inlet exceeded at inlet Id= C160	Run# 363	Supercritical flow
Capacity of grade inlet exceeded at inlet Id= C161	Run# 365	Supercritical flow
Capacity of grade inlet exceeded at inlet Id= C162	Run# 391	Supercritical flow
Capacity of grade inlet exceeded at inlet Id= C191	Run# 393	Supercritical flow
Capacity of grade inlet exceeded at inlet Id= C192	Run# 394	Supercritical flow
Capacity of grade inlet exceeded at inlet Id= C193	Run# 395	Supercritical flow
Capacity of grade inlet exceeded at inlet Id= C194	Run# 396	Supercritical flow
Capacity of grade inlet exceeded at inlet Id= C195	Run# 397	Supercritical flow
Capacity of grade inlet exceeded at inlet Id= C196	Run# 398	Supercritical flow
Capacity of grade inlet exceeded at inlet Id= C197 (bypass to C199)	Run# 425	Supercritical flow
Capacity of grade inlet exceeded at inlet Id= C198 (bypass to C200)	Run# 426	Supercritical flow
Capacity of grade inlet exceeded at inlet Id= C199 (bypass to C187)	Run# 427	Supercritical flow
Capacity of grade inlet exceeded at inlet Id= C200 (bypass to C188)	Run# 428	Supercritical flow
Capacity of grade inlet exceeded at inlet Id= C201 (bypass to C189)	Run# 453	Supercritical flow
Capacity of grade inlet exceeded at inlet Id= C202	Run# 454	Supercritical flow
Capacity of grade inlet exceeded at inlet Id= C203	Run# 455	Supercritical flow
Capacity of grade inlet exceeded at inlet Id= C261 (bypass to C266)	Run# 456	Supercritical flow
Capacity of grade inlet exceeded at inlet Id= C265 (bypass to C257)	Run# 483	Supercritical flow
Capacity of grade inlet exceeded at inlet Id= C266	Run# 484	Supercritical flow
Capacity of grade inlet exceeded at inlet Id= C267	Run# 486	Supercritical flow
Capacity of grade inlet exceeded at inlet Id= C268	Run# 502	Supercritical flow
Capacity of grade inlet exceeded at inlet Id= C269 (bypass to C227)	Run# 503	Supercritical flow
Capacity of grade inlet exceeded at inlet Id= C298	Run# 523	Supercritical flow
Capacity of grade inlet exceeded at inlet Id= C299 (bypass to C306)	Run# 524	Supercritical flow
Capacity of grade inlet exceeded at inlet Id= C300	Run# 526	Supercritical flow
Capacity of grade inlet exceeded at inlet Id= C301		
Capacity of grade inlet exceeded at inlet Id= C306 (bypass to C296)		
Capacity of grade inlet exceeded at inlet Id= C307		
Capacity of grade inlet exceeded at inlet Id= C346 (bypass to C341)		
Capacity of grade inlet exceeded at inlet Id= C347 (bypass to C348)		
Capacity of grade inlet exceeded at inlet Id= C365		
Capacity of grade inlet exceeded at inlet Id= C366		
Capacity of grade inlet exceeded at inlet Id= C397 (bypass to C395)		
Capacity of grade inlet exceeded at inlet Id= C398 (bypass to C396)		
Capacity of grade inlet exceeded at inlet Id= C427		
Capacity of grade inlet exceeded at inlet Id= C428		
Capacity of grade inlet exceeded at inlet Id= C455 (bypass to C453)		
Capacity of grade inlet exceeded at inlet Id= C456 (bypass to C454)		
Capacity of grade inlet exceeded at inlet Id= C486		
Capacity of grade inlet exceeded at inlet Id= C525		
Capacity of grade inlet exceeded at inlet Id= C526		
Computed left ponded width exceeds allowable width at inlet Id= C423		
Run# 24 Supercritical flow		
Run# 25 Supercritical flow		
Run# 26 Supercritical flow		
Run# 28 Supercritical flow		
Run# 58 Supercritical flow		
Run# 60 Supercritical flow		
Run# 61 Supercritical flow		
Run# 63 Supercritical flow		
Run# 64 Supercritical flow		
Run# 65 Supercritical flow		
Run# 66 Supercritical flow		
Run# 67 Supercritical flow		
Run# 68 Supercritical flow		
Run# 69 Supercritical flow		
Run# 71 Supercritical flow		
Run# 73 Supercritical flow		
Run# 74 Supercritical flow		
Run# 75 Supercritical flow		
Run# 76 Supercritical flow		
Run# 100 Supercritical flow		
Run# 101 Supercritical flow		
Run# 102 Supercritical flow		
Run# 105 Supercritical flow		
Run# 108 Supercritical flow		

NOTES

1. TAILWATER ELEVATIONS FOR THE 2-YEAR HOUSTORM RUNS ARE BASED ON THE SOFFIT ELEVATION OF THE OUTFALL PIPE.
2. EOR HAS REVIEWED ALL GEOPAK 2000 DRAINAGE/ HOUSTORM WARNING MESSAGES AND DETERMINED ACCEPTABLE WITHIN THE DESIGN OUTLINES OF THIS PROJECT.

SDPS
Houston Storm Drainage
Program Support

PGAL
3121 BROADWAY, SUITE 200
HOUSTON, TEXAS 77002
Phone (713) 922-1444
Fax (713) 946-9333

SUPPLIED BY: LANDTECH
PR. NO. P-5576

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

**GARDEN OAKS AND
SHEPHERD PARK (CENTRAL)
DRAINAGE AND PAVING**

STORM SEWER
COMPUTATIONS
PROPOSED 2-YR
SHEET 8 OF 8

NBS NUMBER
M-000285-0001-4

DRAWING SCALE
NTS

CITY OF HOUSTON PM
JEFFREY T. HALL, P.E.

SHEET NO. 71 OF 385

HOUSTORM NODE NAME	XP-SWMM MODEL RUN	XP-SWMM MODEL NODE		LENGTH (FT)	TYPE	SIZE (W X H) (FT)	100 YR FLOW (CFS)	CRITICAL U/S (FT)	100 YR WSEL U/S (FT)
		U/S	D/S						
JB-07	Tp1/V-2	T-BM10	V-2	765	Rectangular	2- 6 X 5 Box	184.95	77.00	75.91
MH560	V2/V-D4	V-2	V-Ditch4	346	Rectangular	2- 6 X 5 Box	254.13	76.70	75.74
JB-06	Link2251	V-Ditch4	Z-NEW7	780	Rectangular	8 X 5 Box	185.22	77.00	75.51
MH480	Z-N7/Z-N6	Z-NEW7	Z-NEW6	348	Rectangular	8 X 5 Box	185.29	75.20	75.05
MH450	Z-N6/Z-N5	Z-NEW6	Z-NEW5	380	Rectangular	8 X 5 Box	181.87	75.42	74.87
MH420	Z-N5/Z-N1	Z-NEW5	Z-NEW1	404	Rectangular	8 X 5 Box	219.25	74.90	74.67
MH390	Z-N1/Z-N2	Z-NEW1	Z-NEW2	424	Rectangular	8 X 5 Box	230.63	75.30	74.32
MH360	Z-N2/Z-8	Z-NEW2	Z-8	204	Rectangular	8 X 5 Box	238.37	75.79	73.85
JB-05	Z-N41/Hm1	Z-8	Gm24	505	Rectangular	10 X 8 Box	226.22	74.63	73.61
	Gm24/Gm25	Gm24	Gm25	63	Rectangular	10 X 8 Box	423.79	74.39	73.48
MH-335	Gm25/Gm26	Gm25	Gm26	489	Rectangular	10 X 8 Box	434.53	74.20	73.46
JB-04	Gm26/Gm27	Gm26	Gm27	53	Rectangular	10 X 10 Box	479.16	75.09	73.29
	Gm27/Hm1	Gm27	Hm1	163	Rectangular	10 X 10 Box	485.43	75.29	73.48
MH330	Hm1/Hm2	Hm1	Hm2	255	Rectangular	10 X 10 Box	494.61	75.79	73.10
	Hm2/Hj1	Hm2	Hj1	9	Rectangular	10 X 10 Box	588.12	74.39	72.97
	Hj1/Hj2	Hj1	Hj2	24	Rectangular	10 X 10 Box	550.21	74.14	72.76
MH290	Hj2/Hj3	Hj2	Hj3	24	Rectangular	10 X 10 Box	608.17	74.41	73.01
	Hj3/Hm8	Hj3	Hm8	173	Rectangular	10 X 10 Box	616.14	73.77	72.65
810	Hm8/Hj4	Hm8	Hj4	175	Rectangular	10 X 10 Box	589.78	73.52	72.43
809	Hj4/Hm9	Hj4	Hm9	93	Rectangular	10 X 10 Box	630.13	73.79	72.31
808	Hm9/Hj5	Hm9	Hj5	113	Rectangular	10 X 10 Box	450.13	72.45	72.24
MH223	Hj5/Hj6	Hj5	Hj6	73	Rectangular	10 X 10 Box	487.49	72.26	72.20
MH221	Hj6/Hj7	Hj6	Hj7	32	Rectangular	12 X 10 Box	473.69	72.39	72.17
MH220	Hj7/Hm11	Hj7	Hm11	141	Rectangular	12 X 10 Box	546.93	72.18	72.16
	Hm11/Hj8	Hm11	Hj8	158	Rectangular	12 X 10 Box	562.81	72.98	72.11
MH180	Hj8/Hj9	Hj8	Hj9	43	Rectangular	12 X 10 Box	532.52	72.68	72.04
	Hj9/Hm12	Hj9	Hm12	360	Rectangular	12 X 10 Box	563.90	72.57	72.03
MH90	Hm12/Hj10	Hm12	Hj10	135	Rectangular	12 X 10 Box	550.03	72.28	71.87
	Hj10/Hj11	Hj10	Hj11	31	Rectangular	12 X 10 Box	464.04	72.28	71.81
	Hj11/Hm13	Hj11	Hm13	169	Rectangular	12 X 10 Box	691.61	72.28	71.49
JB-03	Hm13/Hm14	Hm13	Hm14	183	Rectangular	12 X 10 Box	607.40	71.62	71.39
	Hm14/Hj12	Hm14	Hj12	36	Rectangular	14 X 10 Box	610.24	71.42	71.30
	Hj12/Hj13	Hj12	Hj13	473	Rectangular	14 X 10 Box	699.53	71.60	71.29
MH50	Hj13/Hj14	Hj13	Hj14	28	Rectangular	14 X 10 Box	639.56	71.36	71.10
	Hj14/Hm15	Hj14	Hm15	14	Rectangular	14 X 10 Box	734.06	71.29	71.10
	Hm15/Ij8	Hm15	Ij8	448	Rectangular	14 X 10 Box	820.41	71.30	71.09
JB-02	Ij8/Ij9	Ij8	Ij9	38	Rectangular	14 X 10 Box	881.15	70.95	70.94
	Ij9/Ij10	Ij9	Ij10	10	Rectangular	14 X 10 Box	867.86	70.95	70.93
	Ij10/Im48	Ij10	Im48	15	Rectangular	14 X 10 Box	956.04	70.92	70.91
JB-01	Im48/Ij11	Im48	Ij11	180	Rectangular	14 X 10 Box	1014.68	70.90	70.89

- NOTE:
1. 100 YEAR STORM EVENT WAS ANALYZED USING XP-SWMM HYDRAULIC MODELING SOFTWARE V.2011.
2. 100 YEAR TAILWATER ELEVATION USED IN SWMM MODEL WAS DERIVED FROM THE 24-HOUR RAINFALL WITH A 100 YEAR VARIABLE TAILWATER OF THE OUTFALL CHANNEL.

DATE: 9/10/2015 6:08:06 AM
P:\MSW\945-040\9001_DMS\SWMM\DWG\StormSewer_DWG.dwg



SDPS
Houston Storm Drainage
Program Support





PGAL
3131 BRINDLEWOOD, SUITE 200
Houston, Texas 77042
Phone (713) 822-1444
Fax (713) 968-9333



SURVEYED BY: LANDTECH P-93176

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

STORM SEWER COMPUTATION
PROPOSED 100 YR
SHEET 1 OF 1

WBS NUMBER
M-000285-0001-4

DRAWING SCALE
N.T.S.

CITY OF HOUSTON PW
JEFFREY T. HALL, P.E.
SHEET NO. 72 OF 385



55630

DATE: 9/10/2015 6:08:06 AM
P:\MSW\945-040\9001_DMS\SWMM\DWG\StormSewer_DWG.dwg

PAVING, STORM & GENERAL KEY NOTES

- ① PROPOSED 9" REINFORCED CONCRETE PAVEMENT WITH 8" LIME-FLY ASH STABILIZED SUBGRADE.
- ② PROPOSED ASPHALTIC CONCRETE PAVEMENT, 2" ASPHALTIC CONCRETE SURFACE WITH 10" BLACK BASE AND 8" STABILIZED SUBGRADE. SEE STANDARD DETAIL 02741-01-HOT-MIX ASPHALTIC CONCRETE PAVEMENT DETAILS.
- ③ PROPOSED SAW CUT EXISTING PAVEMENT/DRIVEWAY TO FULL DEPTH.
- ④ MATCH EXISTING DRIVEWAY ELEVATIONS.
- ⑤ PROPOSED STANDARD 6" CONCRETE CURB AS SHOWN ON COH STANDARD DETAIL 02771-01 - CURB, CURB AND GUTTER AND HEADER DETAILS.
- ⑥ EXIST STORM MH TO REMAIN. CUT AND PLUG EXIST STORM SEWER LEADS (ALL SIZES, ALL DIRECTIONS).
- ⑦ PROPOSED 6" DOWEL CURB AS SHOWN ON COH STD DETAIL 02771-01-CURB, CURB AND GUTTER AND HEADER DETAILS.
- ⑧ CONCRETE DRIVEWAY AS SHOWN ON COH STANDARD DETAIL 02754-01. REFER TO DRIVEWAY SCHEDULE FOR DRIVEWAY TYPE, (SHEET 132-140).
- ⑨ PROPOSED 3/4-INCH BOARD EXPANSION OR PREMOLEDDED NON-EXTRUDING JOINT BETWEEN SIDEWALK AND CURB.
- ⑩ PROPOSED 9" HIGH EARLY STRENGTH CONCRETE PAVEMENT.
- ⑪ PROPOSED HORIZONTAL DOWELS, 18 INCHES LONG, DRILLED AND EMBEDDED 12 INCHES INTO THE CENTER OF THE EXISTING SLAB WITH PO ROC OR EQUAL. DOWELS SHALL BE 12 INCHES, CENTER TO CENTER, UNLESS OTHERWISE SPECIFIED, AS SHOWN COH STD DETAIL 02752-01.
- ⑫ PROPOSED SPEED CUSHIONS AS SHOWN ON COH STD DWG NO. 13501-01.
- ⑬ PROPOSED STORM PIPE CONNECTION TO STORM REINFORCED CONCRETE BOX. (NO SEPARATE PAY) (PROPOSED RCP STORM SEWER CONNECTION THROUGH WALL OF PROPOSED RCB STORM SEWER. PRECAST RCB MANUFACTURER SHALL PROVIDE PRECAST PIPE OPENING WITH OR WITHOUT KNOCK-OUT AS REQUIRED, WITH HOLE DIAMETER APPROXIMATELY 6" LARGER THAN OD OF RCP STORM SEWER, AND SUBMIT SHOP DRAWINGS INDICATING EXACT SIZE AND LOCATION OF KNOCK-OUT AS SHOWN ON PLANS. CONTRACTOR SHALL INSTALL FLEXIBLE ADHESIVE WATER STOP STRIP AROUND PIPE PERIMETER OF RCP AND PIPE OPENING, AND THEN SEAL PIPE ANNULUS WITH NON-SHRINK GROUT. PROVIDE SF302 SYNKO-FLEX, ADEKA ULTRASEAL P-201, OR APPROVED EQUAL WATER STOP).
- ⑭ PROPOSED CURB TRANSITION, PROP 3 FT TRANSITION FROM 6" CURB TO 0". MATCH 11'-6" FLUSH CURB/GUTTER.
- ⑮ PROPOSED 6-INCH WIDE RETAINING WALL.
- ⑯ CONNECT PROPOSED RCP STORM SEWER TO EXISTING RCP STORM SEWER AT NEAREST PIPE JOINT.
- ⑰ PROPOSED 5-FOOT WIDE 4 1/2" CONC SIDEWALK AS SHOWN ON DETAIL 02775-01.
- ⑱ CONNECT PROPOSED SIDEWALK TO EXISTING SIDEWALK. (NO SEPARATE PAY)
- ⑲ REMOVE AND DISPOSE BRICK PLUG AND CONNECT PROP. STORM SEWER RCB TO EXISTING RCB AT NO SEPARATE PAY.
- ⑳ PROP 24" ARCH PIPE CULVERT UNDER DRIVEWAY.
- ㉑ MATCH EXISTING PAVEMENT FOR GRADE AND/OR ALIGNMENT.
- ㉒ GRADE EXIST DITCH TO DRAIN. AFTER INSTALLATION OF STORM SEWER RESHAPE BANKS OF THE DITCH TO ITS EXISTING CONDITIONS. REGRADE DITCH ONLY IF NECESSARY. (NO SEPARATE PAY)
- ㉓ EXIST STORM SEWER TO REMAIN IN SERVICE. PROTECT FROM DAMAGE.
- ㉔ CAUTION EXISTING GAS FACILITIES IN AREA.
- ㉕ PROPOSED BRICK STORM SEWER PLUGS FOR FUTURE STORM CONNECTIONS. (NO SEPARATE PAY)
- ㉖ PROP CONCRETE PATCH FOR FUTURE STUB OUT STM CONSTRUCTION.
- ㉗ REMOVE AND DISPOSE EXISTING ASPHALT OR PORTLAND CEMENT CONCRETE PAVEMENT CONCRETE BASE, AND/OR CEMENTOR LIMESTABILIZED BASE COURSE WITH OR WITHOUT ASPHALT SURFACING AND WITH AND WITHOUT CURB OR CURB AND GUTTER
- ㉘ PROPOSED ASPHALT OVERLAY/ASPHALT PVMT TRANSITION.
- ㉙ END PROPOSED OVERLAY/ASPHALT PVMT TRANSITION.
- ㉚ MATCH EXISTING CURB OR CURB AND GUTTER FOR GRADE AND/OR ALIGNMENT
- ㉛ PROPOSED WHEELCHAIR RAMP, AS SHOWN ON WHEELCHAIR RAMP DETAILS.
- ㉜ ADJUST SIDEWALK ELEVATIONS TO SATISFY RAMP SLOPES.
- ㉝ ADJUST EXISTING MANHOLE FRAME AND COVER TO FIT NEW GRADE.
- ㉞ REMOVE AND DISPOSE EXIST CURB OR CURB AND GUTTER AS APPLICABLE. (INCIDENTAL TO PAVEMENT REMOVAL PAY ITEM)
- ㉟ TEMPORARY CONSTRUCTION EASEMENT, REFER TO DRIVEWAY TABLE FOR MORE INFORMATION.
- ㊱ SUPPORT AND PROTECT EXIST STORM SEWER DURING CONSTRUCTION.
- ㊲ PROPOSED DITCH FLOW LINE
- ㊳ CROSS SLOPE VARIES IN ASPHALT TRANSITION SECTION, MATCH EXIST CROSS SLOPE AT EXISTING PAVEMENT TIE -IN.
- ㊴ REGRADE DITCH TO DRAIN.
- ㊵ STONE STREET NAME PILLAR TO BE PROTECTED DURING CONSTRUCTION.
- ㊶ PROPOSED STANDARD CONCRETE PAVING HEADER AS SHOWN ON COH STD DETAIL 02771-01 - CURB, CURB AND GUTTER AND HEADER DETAILS. REMOVE AND DISPOSE EXISTING STORM SEWER.
- ㊷ CONNECT PROPOSED STORM TO EXISTING MANHOLE. (NO SEPARATE PAY)
- ㊸ PROPOSED 4-FOOT WIDE CONC SIDEWALK (MATCH EXIST SIDEWALK CONDITIONS) AS SHOWN ON DETAIL 02775-01.
- ㊹ CONNECT EXISTING STORM TO PROPOSED RCB. (NO SEPARATE PAY)
- ㊺ GROUT FILL AND ABANDON EXISTING STORM SEWER.
- ㊻ CONNECT EXISTING STORM TO PROPOSED MANHOLE OR INLET. (NO SEPARATE PAY)
- ㊼ NEWLY CONSTRUCTED DRIVEWAY TO REMAIN. PROTECT FROM DAMAGE.
- ㊽ PROPOSED LIMITS OF PAVEMENT REPAIR AND RESTORATION.
- ㊾ PROPOSED STORM SEWER BEND.

WATER LINE KEY NOTES

- ⑩ ABANDON WATER LINE IN ACCORDANCE WITH COH STD SPECIFICATION SECTION 02516. MAINTAIN ALL PRIVATE WATER SERVICES DURING CONSTRUCTION AND COORDINATE TRANSFER OF SERVICES TO MINIMIZE SERVICE DISRUPTION.
- ⑪ REMOVE AND DISPOSE WATER LINE AND APPURTENANCES IN ACCORDANCE WITH COH STD SPECIFICATION 02221. MAINTAIN ALL PRIVATE WATER SERVICES DURING CONSTRUCTION AND COORDINATE TRANSFER OF SERVICES TO MINIMIZE SERVICE DISRUPTION.
- ⑫ FIELD LOCATE AND PROTECT WATER LINE AND APPURTENANCES TO REMAIN IN SERVICE. ALL EXCAVATIONS WITHIN 18 INCHES OF PIPE SHALL BE MADE BY HAND EQUIPMENT. PROVIDE PIPE SUPPORTS AND THRUST RESTRAINTS AS REQUIRED WHEN PIPE IS EXPOSED (NO SEPARATE PAYMENT).
- ⑬ ADJUST WATER VALVE BOX FLUSH WITH NEW PAVING OR FINISH GRADE. REPLACE MISSING OR DAMAGED VALVE BOXES AND COVERS. RE: COH STD SPECIFICATION SECTION 02086.
- ⑭ REMOVE AND DISPOSE WATER VALVE BOX FOR PROPOSED ABANDONED OR REMOVED WATER LINE (NO SEPARATE PAYMENT).
- ⑮ RELOCATE FIRE HYDRANT TO 3' BEHIND NEW BACK OF CURB LOCATION, INCLUDING 6" GATE VALVE & BOX WHEN APPLICABLE.
- ⑯ REMOVE AND SALVAGE FIRE HYDRANT.
- ⑰ PROPOSED WATER SERVICE LINE AND TAP CONNECTION OR RECONNECTION W/ NEW TAP TO MATCH EXISTING SERVICE LINE SIZE. RE: COH STD SPEC SECTION 02512 & COH STD DETAIL 02512-01 & 02512-02.
- ⑱ RELOCATE WATER METER & BOX, RE: COH STD DETAIL 02526-01.
- ⑲ CENTER ONE FULL LENGTH JOINT (18" MIN) OF WATER LINE AT SANITARY SEWER WITH 2 FEET MIN VERTICAL CLEARANCE. PROVIDE ADDITIONAL REQUIREMENTS WHEN APPLICABLE PER TABLE 7.3 OF THE COH INFRASTRUCTURE DESIGN MANUAL, RE: WATER LINE PROTECTION REQUIREMENTS, SHT 379.
- ⑳ SUPPORT WATER LINE DURING CONSTRUCTION (NO SEPARATE PAYMENT).
- ㉑ PROPOSED WATER LINE CROSSING BELOW STORM SEWER WITH 1-FOOT MINIMUM CLEARANCE. PROVIDE RESTRAINED JOINT PVC OFFSET SECTION PER STD COH DWG 02511-01 (RE: SHT 274) WHEN INDICATED.
- ㉒ PROPOSED SPLIT STEEL PIPE CASING INSTALLED ON AUGERED WATER LINE WITH PIPE ISOLATORS AND END SEALS. CENTER CASING AT PROPOSED STORM SEWER CROSSING AND PROVIDE CONFLICT MANHOLE WHERE APPLICABLE. INSTALL AUGERED PIPE WITH 20-FT JOINT OF C900 WATER LINE APPROXIMATELY CENTERED AT STORM SEWER CROSSING.
- ㉓ PROPOSED STEEL PIPE CASING INSTALLED ON PROPOSED OPEN CUT WATER LINE WITH PIPE ISOLATORS AND END SEALS. CENTER CASING AND 20-FT JOINT OF C900 PVC WATER LINE AT PROPOSED STORM OR SANITARY SEWER CROSSING AND PROVIDE CONFLICT MANHOLE WHERE APPLICABLE.
- ㉔ EXISTING FIRE HYDRANT TO REMAIN IN SERVICE. PROTECT FROM DAMAGE.
- ㉕ PROPOSED SPLIT STEEL PIPE CASING INSTALLED ON EXISTING WATER LINE WITH PIPE ISOLATORS AND END SEALS WHERE EXISTING OR PROPOSED PIPE JOINT CANNOT BE AVOIDED INSIDE OF CASING DUE TO CENTERED PIPE JOINT OVER ADJACENT SANITARY SEWER PER TCEC REQUIREMENTS. CENTER CASING AT PROPOSED STORM SEWER CROSSING AND PROVIDE CONFLICT MANHOLE WHERE APPLICABLE.

SANITARY SEWER KEY NOTES

- ⑱ PROPOSED SPLIT STEEL PIPE CASING INSTALLED ON EXISTING OR AUGERED SANITARY SEWER WITH PIPE ISOLATORS AND END SEALS. CENTER CASING AT PROPOSED STORM SEWER CROSSING AND PROVIDE CONFLICT MANHOLE WHERE APPLICABLE. SEE SHT 153-154 FOR CONFLICT MANHOLE DETAIL.
- ⑲ PROPOSED STEEL PIPE CASING INSTALLED ON PROPOSED OPEN CUT SANITARY SEWER WITH PIPE ISOLATORS AND END SEALS, CENTERED AT WATER LINE CROSSING.
- ⑳ REMOVE AND DISPOSE SANITARY SEWER IN ACCORDANCE WITH COH STD SPEC SECTION 02221.
- ㉑ REMOVE AND DISPOSE SANITARY MANHOLE IN ACCORDANCE WITH COH STD SPEC SECTION 02221.
- ㉒ CUT & PLUG SANITARY SEWER IN ACCORDANCE WITH COH STD SPEC SECTION 02222 (NO SEPARATE PAYMENT).
- ㉓ REMOVE AND DISPOSE MANHOLE TOP TO 5' MIN DEPTH, CAP, GROUT FILL AND ABANDON SANITARY MANHOLE IN ACCORDANCE WITH COH STD SPEC SECTION 02222.
- ㉔ ADJUST SANITARY MANHOLE FRAME AND COVER FLUSH WITH NEW PAVING OR 3" ABOVE FINISH GRADE IN NON-PAVED AREAS, UNLESS SPECIFIED OTHERWISE ON DRAWINGS.
- ㉕ CONNECT PROPOSED SANITARY SEWER TO EXISTING SANITARY MANHOLE. CORE DRILL HOLE THROUGH EXISTING MANHOLE WALL AND SEAL WATERTIGHT WITH RESILIENT CONNECTOR PER ASTM C923 (NO SEPARATE PAYMENT).
- ㉖ INSTALL 20' JOINT OF SANITARY SEWER WITH MINIMUM PIPE STIFFNESS OF 115 CENTERED AT WATER LINE CROSSING. EMBED SANITARY SEWER WITH CEMENT STABILIZED SAND 1-FOOT BEYOND THE JOINTS AND PROVIDE ADDITIONAL REQUIREMENTS FOR WATER LINE CROSSING AS APPLICABLE OR REQUIRED. RE: WATER LINE PROTECTION REQUIREMENTS, SHT 379.
- ㉗ PROPOSED SANITARY SEWER SERVICE LINE AND RECONNECTION. RETAIN & CONNECT TO EXISTING STACKS OR TEES WHEN POSSIBLE FOR EXISTING MAINS. RE: COH STD DWG 02534-01, 02 & 03. RE: DETAIL 2, SHT 385 FOR SERVICE LINES THRU BOX STORM SEWER WHEN REQUIRED.
- ㉘ EXISTING SANITARY SEWER TO REMAIN IN SERVICE. SUPPORT AND PROTECT FROM DAMAGE DURING CONSTRUCTION.
- ㉙ GROUT FILL AND ABANDON SANITARY SEWER IN ACCORDANCE WITH COH STD SPEC SECTION 02222.
- ㉚ CONNECT PROPOSED SAN SEWER TO EXISTING SAN SEWER WITH STANDARD RUBBER GASKET PIPE JOINT OR COH APPROVED PIPE COUPLING FOR SAN SEWER. CONNECT EXISTING SAN SEWER TO PROPOSED MANHOLE WITH NEW SEWER STUB AND STANDARD RESILIENT CONNECTOR (NO SEPARATE PAYMENT EXCEPT LF OF SEWER STUBS).
- ㉛ PROPOSED SANITARY CLEAN-OUT WITH DUAL WYE & PLUG SERVICE LINE TERMINATION. RE: COH STD DWG 02534-05.
- ㉜ PROPOSED SANITARY SEWER SERVICE CONNECTION WITH STACK, RE: COH STD DWG 02534-02.
- ㉝ PROPOSED SANITARY SEWER SERVICE CONNECTION WITHOUT STACK, RE: COH STD DWG 02534-04.
- ㉞ PROPOSED SANITARY SEWER MANHOLE PIPE DROP, RE: COH STD DWG 02082-02 & 02082-03.
- ㉟ APPROXIMATE LOCATION OF EXISTING SANITARY SEWER STACK, REFER TO SECTION 01110 - SUMMARY OF WORK FOR ADDITIONAL INFORMATION.

DATE: 1/18/2018 7:30:43 AM
 R:\00000000\CAD\DWG\Draw\2018\01\112000.dwg

DATE: 1/18/2018 7:30:43 AM
 R:\00000000\CAD\DWG\Draw\2018\01\112000.dwg

SDPS
Houston Storm Drainage
Program Support

PGAL
3131 BRADDOCK, SUITE 200
 HOUSTON, TEXAS 77002
 PHONE (713) 622-1444
 FAX (713) 968-9333

STATE OF TEXAS
 CIVIL ENGINEERING
 LICENSE NO. 12523
 EXPIRES 12/31/2018

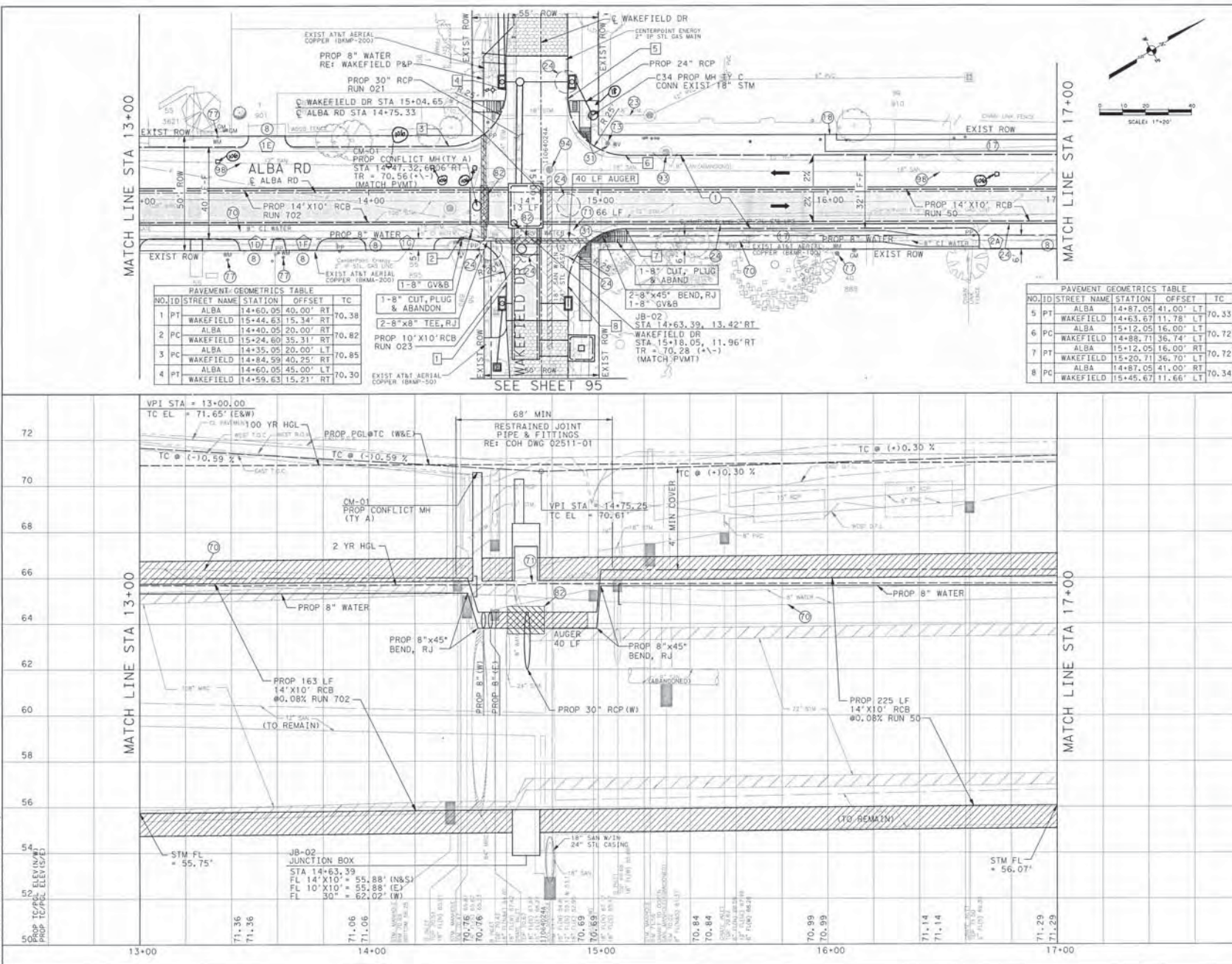
CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

**GARDEN OAKS AND
 SHEPHERD PARK (CENTRAL)
 DRAINAGE AND PAVING**

KEY NOTES

WBS NUMBER	M-000285-0001-4
DRAWING SCALE	55630
NTS	
CITY OF HOUSTON PW	
JEFFREY T. HALL, P.E.	
SHEET NO. 73 OF 385	

DATE: 04/20/2015 14:07 PM
 DRAWING: 000285-0001-4



MATCH LINE STA 13+00

MATCH LINE STA 17+00

PAVEMENT GEOMETRICS TABLE

NO.	ID	STREET NAME	STATION	OFFSET	TC
1	PT	WAKEFIELD	15+44.63	15.34' RT	70.38
2	PC	WAKEFIELD	14+80.05	20.00' RT	70.82
3	PC	WAKEFIELD	14+35.05	20.00' LT	70.85
4	PT	WAKEFIELD	14+84.59	40.25' RT	70.85
5	PT	ALBA	14+60.05	45.00' LT	70.30
6	PT	WAKEFIELD	14+59.63	15.21' RT	70.30

PAVEMENT GEOMETRICS TABLE

NO.	ID	STREET NAME	STATION	OFFSET	TC
5	PT	ALBA	14+87.05	41.00' LT	70.33
6	PC	WAKEFIELD	14+63.67	11.78' LT	70.72
7	PT	ALBA	15+12.05	16.00' LT	70.72
8	PC	WAKEFIELD	15+20.71	36.70' LT	70.72
9	PC	ALBA	14+87.05	41.00' RT	70.34

- NOTES:**
- FOR HORIZONTAL ALIGNMENT DATA, SEE GEOMETRIC DATA SUMMARY. (SHEET NO. 5-9).
 - CURB INLETS & PAVEMENT CALLOUTS ARE TO FACE OF CURB OR EDGE OF PAVT UNLESS NOTED OTHERWISE.
 - REFER TO CROSS STREET PLAN AND PROFILE SHEETS FOR SIDEWALK DRAINAGE AND PAVING INFORMATION.
 - REFER TO DEMOLITION PLAN, (SHEET NO. 173-183) FOR STORM REMOVAL LIMITS IN ACCORDANCE WITH COH STD SPEC SECTION 02211. AND PAVEMENT REMOVAL LIMITS.

- LEGEND**
- DRIVEWAY NUMBER (SEE DRIVEWAY TABLE SHEET FOR MORE INFORMATION)
 - PROP LIMITS OF ASPHALT TRANSITION PAVEMENT

TRM PNT. NO. 4
 FND 34" IN W/CAF
 STA 14+54.30, 36.52' RT ALBA ST.
 STA 15+40.97, 19.25' RT WAKEFIELD ST.
 ELEV. = 71.14

PROJECT BENCHMARK DATA:
 CITY OF HOUSTON MONUMENT NO. 5260-8208, A TYPE 8A MARK LOCATED ON THE NORTHEAST CORNER OF ALBA ROAD AND SUE BARNETT DRIVE. ELEVATION = 74.48' (NAD83/CORS 2011 ADJ.)

TO ARRANGE FOR LINES TO BE TURNED OFF OR MOVED, CALL CENTERPOINT AT 713-207-2222.

PRIVATE UTILITY LINES SHOWN
 AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.W. OR EASEMENTS, CALL THE LINE STAR NOTIFICATION 713-223-5243.

[Signature] DATE: 10-20-15
 APPROVED FOR AT&T TEXAS/UT UNDERGROUND CONDUIT FACILITIES ONLY
 SIGNATURE VALID FOR ONE YEAR

[Signature] DATE: 10-20-15
 APPROVED FOR AT&T TEXAS/UT UNDERGROUND CONDUIT FACILITIES ONLY
 THIS SIGNATURE VERIFIES EXISTING UNDERGROUND FACILITIES - NOT TO BE USED FOR CONFLICT VERIFICATION. SIGNATURE VALID FOR SIX MONTHS.

SDPS
 Houston Storm Drainage Program Support

PGAL
 3151 BRUNNEN, SUITE 200
 HOUSTON, TEXAS 77042
 Phone (713) 628-1444
 Fax (713) 968-9533

SUPPLIED BY: LANTECH
 18 NO.

CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

ALBA RD
 PLAN & PROFILE
 STA 13+00 TO STA 17+00

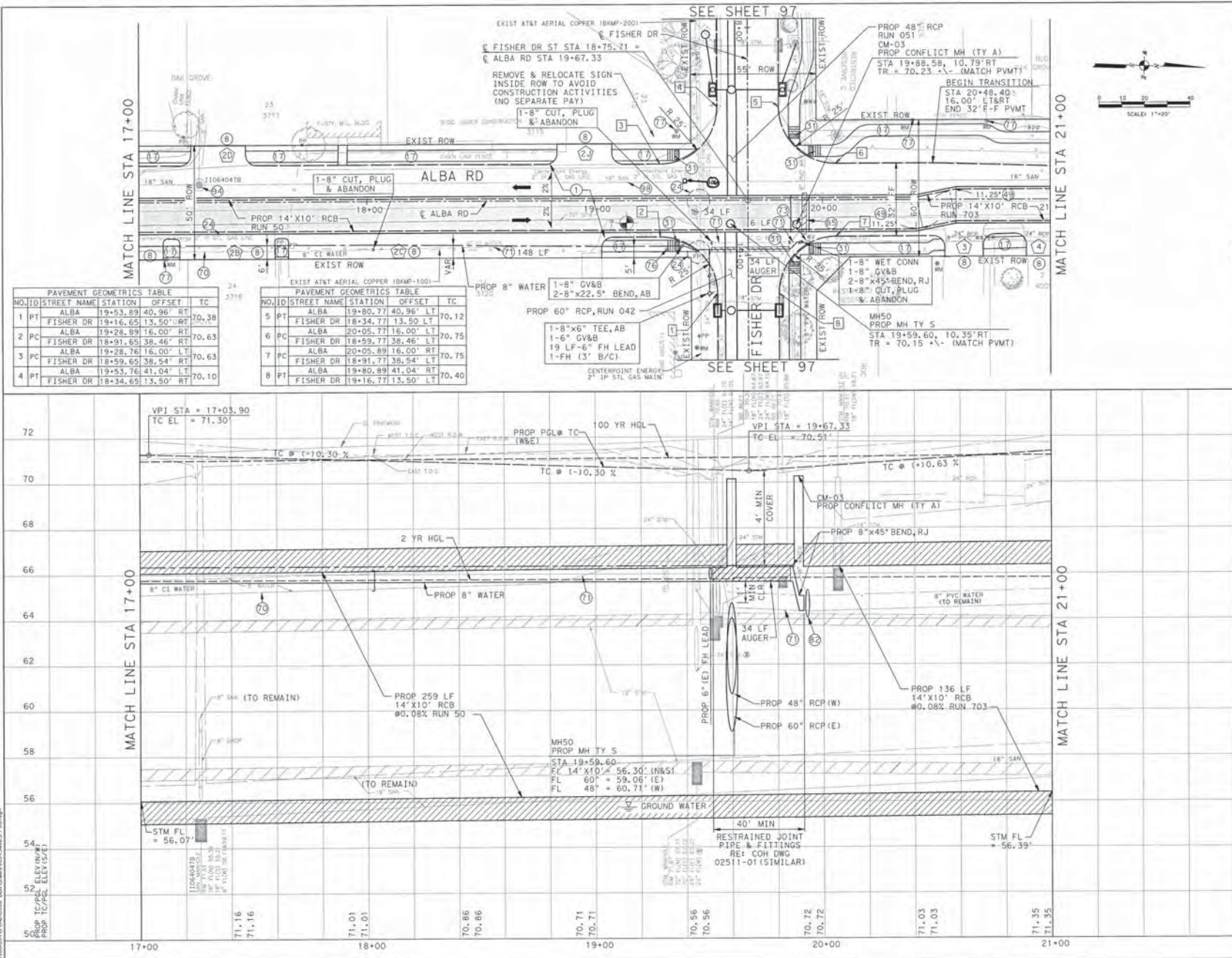
WBS NUMBER
 M-000285-0001-4

DRAWING SCALE
 HORIZ. 1"=20' VERT. 1"=2'

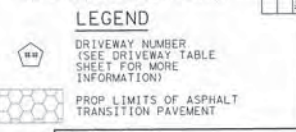
CITY OF HOUSTON PM
 JEFFREY T. HALL, P.E.

SHEET NO. 75 OF 385

55630



- NOTES:**
- FOR HORIZONTAL ALIGNMENT DATA, SEE GEOMETRIC DATA SUMMARY, (SHEET NO. 5-9).
 - CURB INLETS & PAVEMENT CALLOUTS ARE TO FACE OF CURB OR EDGE OF PAVMT UNLESS NOTED OTHERWISE.
 - REFER TO CROSS STREET PLAN AND PROFILE SHEETS FOR SIDE STREET DRAINAGE AND PAVING INFORMATION.
 - REFER TO DEMOLITION PLAN, (SHEET NO. 173-183) FOR STORM REMOVAL LIMITS IN ACCORDANCE WITH COH STD SPEC SECTION 02221. AND PAVEMENT REMOVAL LIMITS.



TBM PNT. NO. 13
 SET COTTON SPRING
 STA 19+55.18, 17.27' RT ALBA ST.
 STA 18+92.96, 12.84' RT FISHER ST.
 ELEV. = 71.30

PROJECT BENCHMARK DATA:
 CITY OF HOUSTON MONUMENT NO. 5260-6208,
 A TYPE BA MARK LOCATED ON THE
 NORTHEAST CORNER OF ALBA ROAD AND
 SUE BARNETT DRIVE. ELEVATION = 74.48'
 (NAVDOCS/CORS 2011 ADJ.).

TO ARRANGE FOR LINES TO BE TURNED OFF OR
 MOVED, CALL CENTERPOINT AT 713-207-2222.

PRIVATE UTILITY LINES SHOWN
 AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.W. OR
 EASEMENTS CALL THE LINE STAR NOTIFICATION 713-923-4564.

[Signature] DATE: 10-28-15
 CERTIFICATE AUTHORIZING GAS FACILITIES VERIFICATION ONLY.
 THIS SIGNATURE VERIFIES THAT YOU HAVE CHECKED OFF NATURAL
 GAS LINES COMPLETELY. THIS IS TO BE USED FOR CONFLICT
 VERIFICATION. IT HAS SERVICE LINES ARE NOT SHOWN.
 SIGNATURE VALID FOR SIX MONTHS.

[Signature] DATE: 10-28-15
 APPROVED FOR STATE TEXAS/SHEET UNDERGROUND CONDUIT
 FACILITIES ONLY.
 SIGNATURE VALID FOR ONE YEAR.

[Signature] DATE: 10-28-15
 CERTIFICATE AUTHORIZING ELECTRICAL FACILITIES
 VERIFICATION ONLY.
 THIS SIGNATURE VERIFIES EXISTING UNDERGROUND FACILITIES.
 NOT TO BE USED FOR CONFLICT VERIFICATION.
 SIGNATURE VALID FOR SIX MONTHS.

SDPS
 Houston Storm Drainage
 Program Support

PGAL
 3131 BRADPARK, SUITE 200
 Houston, Texas 77042
 Phone (713) 622-1444
 Fax (713) 988-8333

STATE OF TEXAS
 CELESTIA K. GEORGINO
 94253
 LICENSED PROFESSIONAL ENGINEER
 CIVIL ENGINEERING

SUBMITTED BY LANDTECH
 FB NO. 17-5576

CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND
 SHEPHERD PARK (CENTRAL)
 DRAINAGE AND PAVING

ALBA RD
 PLAN & PROFILE
 STA 17+00 TO STA 21+00

WBS NUMBER
 M-000285-0001-4

DRAWING SCALE
 HORIZ. 1"=20' VERT. 1"=2'

CITY OF HOUSTON PM
 JEFFREY T. HALL, P.E.

SHEET NO. 76 OF 385

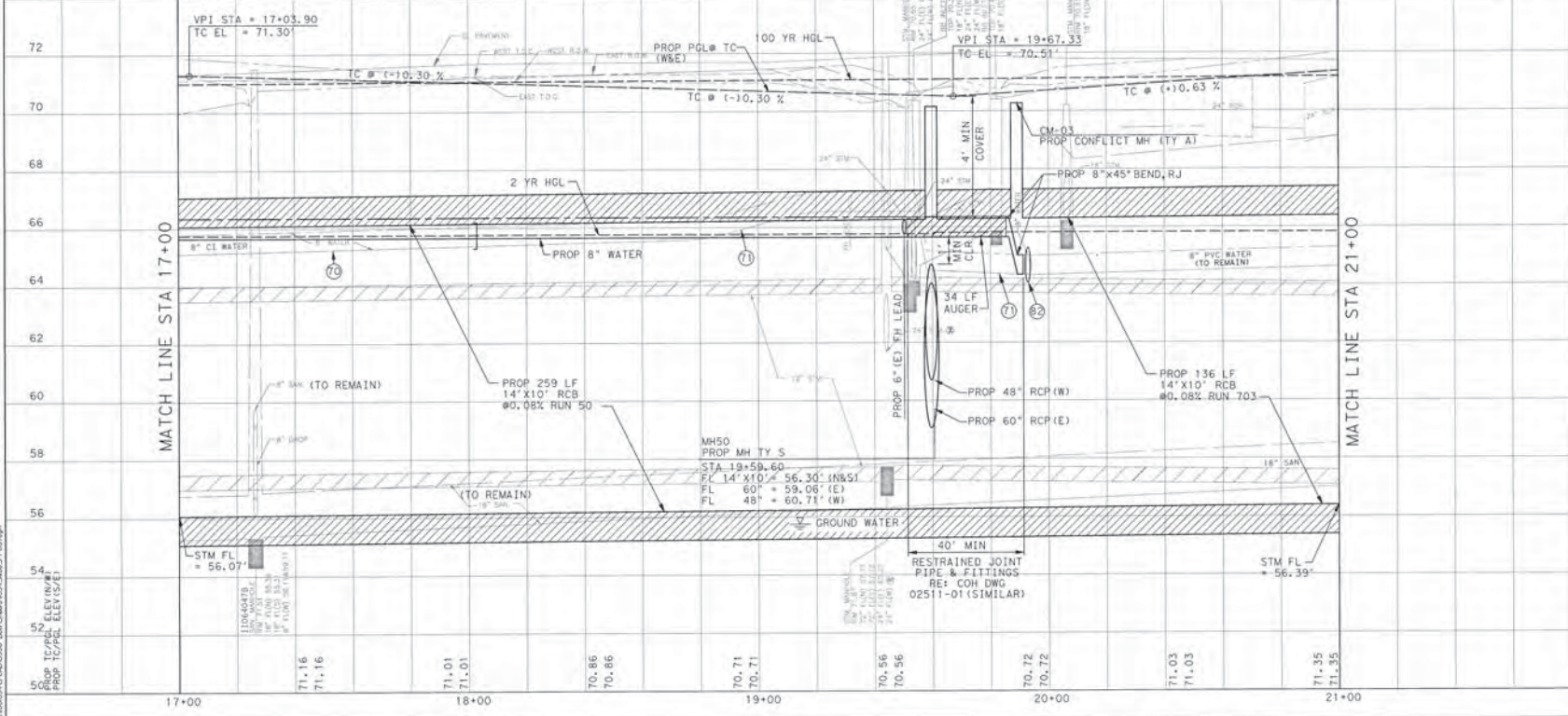
155630

PAVEMENT GEOMETRICS TABLE

NO.	ID	STREET NAME	STATION	OFFSET	TC
1	PT	ALBA	19+53.89	40.96' RT	70.38
		FISHER DR	19+16.65	13.50' RT	70.38
2	PC	ALBA	19+28.89	16.00' RT	70.63
		FISHER DR	18+91.65	38.46' RT	70.63
3	FC	ALBA	19+28.76	16.00' LT	70.63
		FISHER DR	18+59.65	38.54' RT	70.63
4	PT	ALBA	19+53.76	41.04' LT	70.10
		FISHER DR	18+34.65	13.50' RT	70.10

EXIST AIRT AERIAL COPPER (BAMP-100)

NO.	ID	STREET NAME	STATION	OFFSET	TC
5	PT	ALBA	19+80.77	40.96' LT	70.12
		FISHER DR	18+34.77	13.50' LT	70.12
6	PC	ALBA	20+05.77	16.00' LT	70.75
		FISHER DR	18+59.77	38.46' LT	70.75
7	FC	ALBA	20+05.89	16.00' RT	70.75
		FISHER DR	18+91.77	38.54' LT	70.75
8	PT	ALBA	19+80.89	41.04' RT	70.40
		FISHER DR	19+16.77	13.50' LT	70.40



DATE: 10/28/15 1:46:57 PM
 AUGUSTIN@CADDWORKS.COM D:\CADDWORKS\2015\ALBA.PWD.dgn

PAVEMENT GEOMETRICS TABLE				
NO.	ID	STREET NAME	STATION	OFFSET
5	PT	ALBA	28+66.62	36.72' LT
		W 42ND ST	11+01.09	11.50' LT
6	PC	ALBA	28+91.40	11.50' LT
		W 42ND ST	11+27.03	36.03' LT
7	PC	ALBA	28+92.94	11.50' RT
		W 42ND ST	11+50.06	37.03' LT
8	PT	ALBA	28+67.72	36.78' RT
		W 42ND ST	11+74.71	11.50' LT

PAVEMENT GEOMETRICS TABLE				
NO.	ID	STREET NAME	STATION	OFFSET
1	PT	ALBA	28+44.52	36.51' RT
		W 42ND ST	11+74.31	11.50' RT
2	PC	ALBA	28+19.30	11.50' RT
		W 42ND ST	11+48.97	36.40' RT
3	PC	ALBA	28+18.91	11.50' LT
		W 42ND ST	11+25.97	36.65' RT
4	PT	ALBA	28+43.70	36.72' LT
		W 42ND ST	11+01.16	11.62' RT

MH90 PROP MH TY 5
 STA 28+40.10, 2.97' LT
 W 42ND ST
 STA 11+34.67, 15.50' RT
 TR = 71.16 +/- (MATCH PVMT)

SEE SHEET 104

- NOTES:**
- FOR HORIZONTAL ALIGNMENT DATA, SEE GEOMETRIC DATA SUMMARY, (SHEET NO. 5-9).
 - CURB INLETS & PAVEMENT CALLOUTS ARE TO FACE OF CURB OR EDGE OF PVMT UNLESS NOTED OTHERWISE.
 - REFER TO CROSS STREET PLAN AND PROFILE SHEETS FOR SIDE STREET DRAINAGE AND PAVING INFORMATION.
 - REFER TO DEMOLITION PLAN, (SHEET NO. 173-183) FOR STORM REMOVAL LIMITS IN ACCORDANCE WITH COH STD SPEC SECTION 02221, AND PAVEMENT REMOVAL LIMITS.

- LEGEND**
- DRIVEWAY NUMBER (SEE DRIVEWAY TABLE SHEET FOR MORE INFORMATION)
 - PROP LIMITS OF ASPHALT TRANSITION PAVEMENT

TBM PNT. NO. 15
 SEE GUYTON SPRINGS
 STA 28+71.86, 12.67' RT ALBA ST.
 STA 11+50.78, 15.99' LT W. 42ND ST.
 ELEV. = 72.18

PROJECT BENCHMARK DATA:
 CITY OF HOUSTON MONUMENT NO. 5260-8208,
 A TYPE AA MARK LOCATED ON THE
 NORTHEAST CORNER OF ALBA ROAD AND
 SUE BARNETT DRIVE. ELEVATION = 74.48'
 (NAVDB/CORS 2011 ADJ.)

TO ARRANGE FOR LINES TO BE TURNED OFF OR MOVED, CALL CENTERPOINT AT 713-207-2222.

PRIVATE UTILITY LINES SHOWN AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.W. OR LANDSCAPE CALL THE LONG STAR NOTIFICATION 713-223-6243.

[Signature] DATE: 10-20-18
 GEOTECHNICAL ENGINEER/NATURAL GAS FACILITIES VERIFICATION ONLY. THIS SIGNATURE VERIFIES THAT YOU HAVE SHOWN CNP NATURAL GAS LINES CORRECTLY AND TO BE USED FOR CONFLICT VERIFICATION. 1 GAS SERVICE LINES ARE NOT SHOWN. SIGNATURE VALID FOR SIX MONTHS.

[Signature] DATE: 10-20-18
 APPROVED FOR AT&T TEXAS/WEST UNDERGROUND FACILITIES ONLY. SIGNATURE VALID FOR ONE YEAR.

SDPS
 Houston Storm Drainage Program Support

PGAL
 3131 BIRNBAUM, SUITE 200
 HOUSTON, TEXAS 77002
 PHONE (713) 822-1444
 FAX (713) 865-9333

CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

ALBA RD
 PLAN & PROFILE
 STA 25+40 TO STA 29+40

WBS NUMBER
 M-000285-0001-4

DRAWING SCALE
 HORIZ. 1"=20' VERT. 1"=2'

CITY OF HOUSTON PM
 JEFFREY T. HALL, P.E.

SHEET NO. 78 OF 385

MATCH LINE STA 25+40

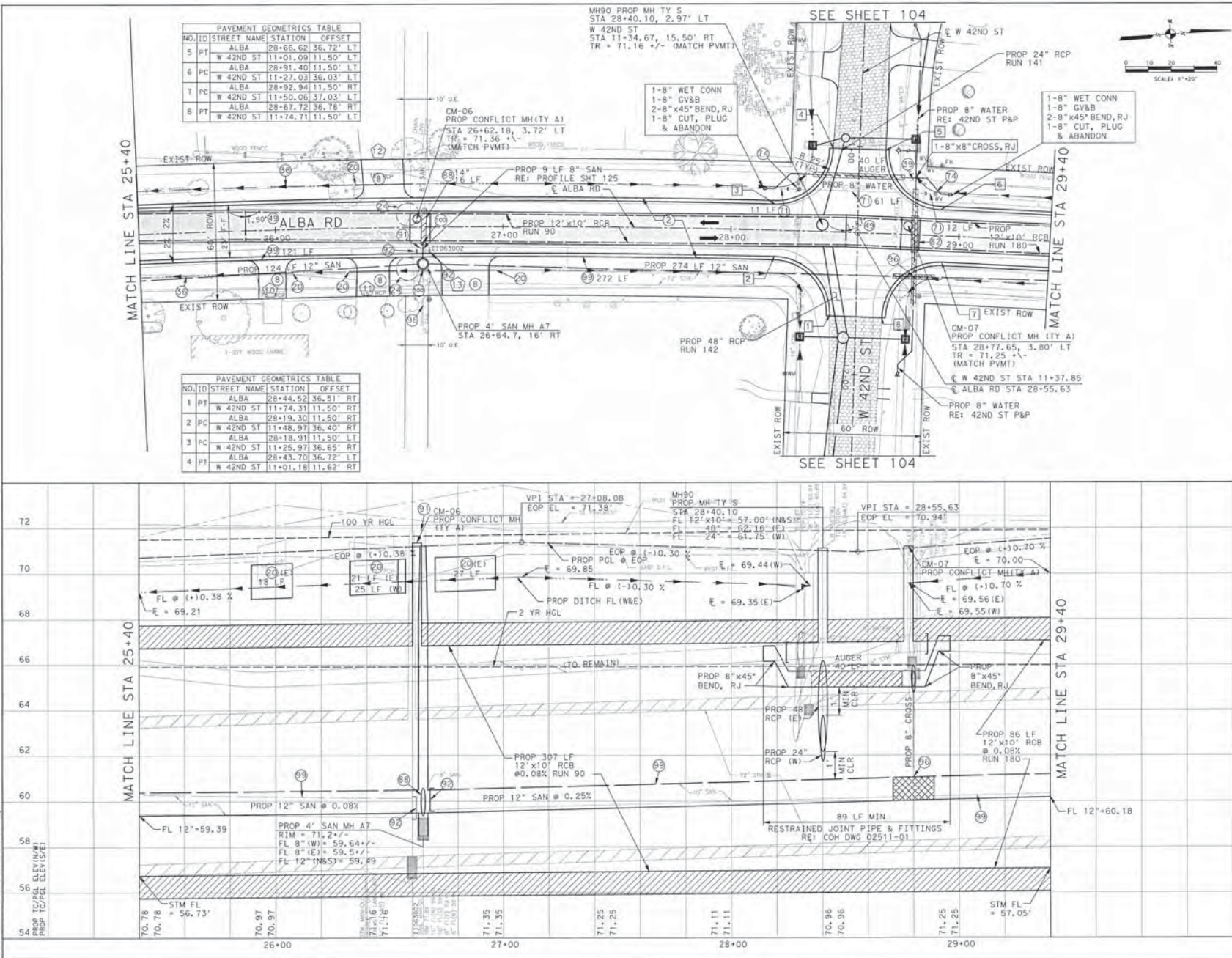
MATCH LINE STA 29+40

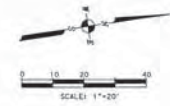
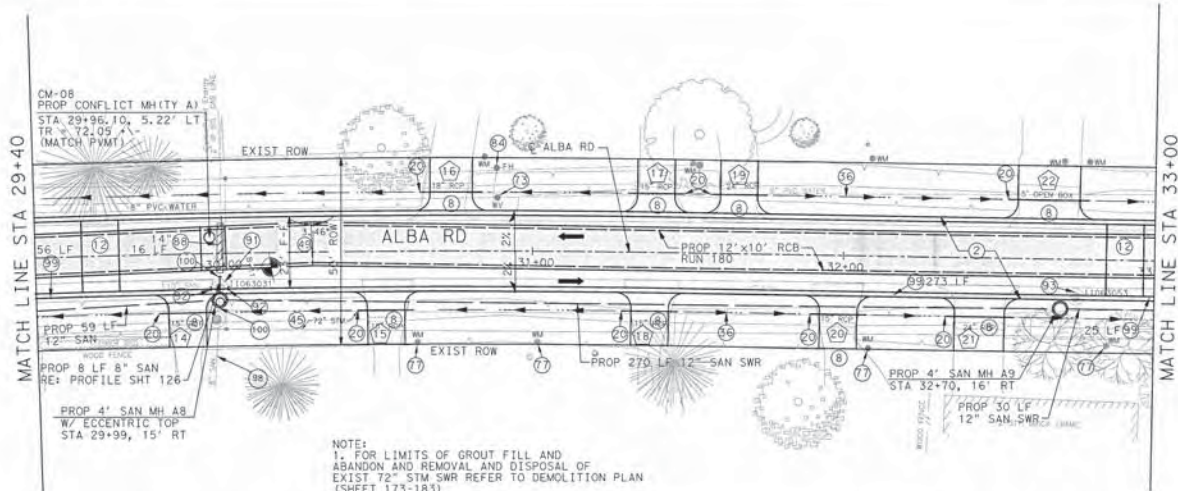
SEE SHEET 104

MATCH LINE STA 25+40

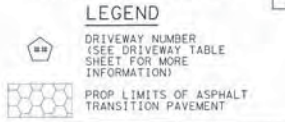
MATCH LINE STA 29+40

DATE: 04/16/2018 8:07 PM
 \\AV000054\CD\000285_0001\Drawings\PM_Alt_PWD.dwg





- NOTES:**
- FOR HORIZONTAL ALIGNMENT DATA, SEE GEOMETRIC DATA SUMMARY. (SHEET NO. 5-9).
 - CURB INLETS & PAVEMENT CALLOUTS ARE TO FACE OF CURB OR EDGE OF PAVT UNLESS NOTED OTHERWISE.
 - REFER TO CROSS STREET PLAN AND PROFILE SHEETS FOR SIDESTREET DRAINAGE AND PAVING INFORMATION.
 - REFER TO DEMOLITION PLAN, (SHEET NO. 173-183) FOR STORM REMOVAL LIMITS IN ACCORDANCE WITH COH STD SPEC SECTION 02221. AND PAVEMENT REMOVAL LIMITS.

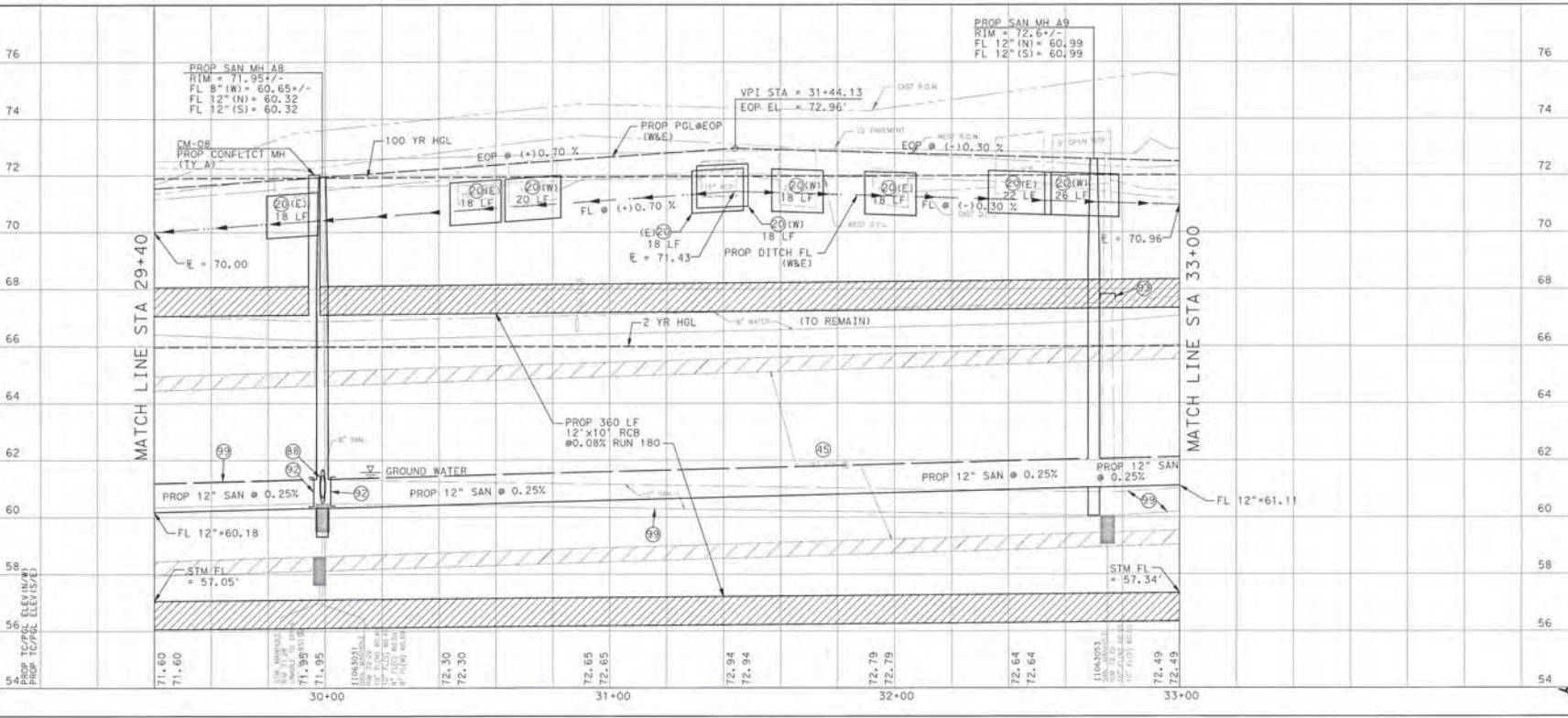


TBM: PNT. NO. 16
 SET COTTON SPINDLE
 STA 34+01.06, 14'-45" RT ALBA ST.
 STA 15+36.96, 19'-21" LT LAMONTE LN.
 ELEV. = 72.93

PROJECT BENCHMARK DATA:
 CITY OF HOUSTON MONUMENT NO. 5260-8208,
 A TYPE 48 MARK LOCATED ON THE
 NORTHEAST CORNER OF ALBA ROAD AND
 SUE BARNETT DRIVE. ELEVATION = 74.48'
 (NAVD83/COORDS. 2011 ADJ.)

TO ARRANGE FOR LINES TO BE TURNED OFF OR
 MOVED, CALL CENTERPOINT AT 713-207-2222.

NOTE:
 1. FOR LIMITS OF GROUT FILL AND
 ABANDON AND REMOVAL AND DISPOSAL OF
 EXIST 72" STM SWR REFER TO DEMOLITION PLAN
 (SHEET 173-183)



PRIVATE UTILITY LINES SHOWN
 AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.W. OR
 EASEMENTS CALL THE LINE STAFF NOTIFICATION 713-223-4547.

APPROVED FOR STATE TRANSPORT UNDERGROUND CONDUIT
 FACILITIES ONLY
 SIGNATURE VALID FOR ONE YEAR
 DATE: 10-20-15

APPROVED FOR EXISTING UNDERGROUND FACILITIES
 VERIFICATION ONLY.
 THIS SIGNATURE VERIFIES EXISTING UNDERGROUND FACILITIES
 TO BE USED FOR CONFLICT VERIFICATION. I
 SIGNATURE VALID FOR SIX MONTHS.
 DATE: 10-20-15



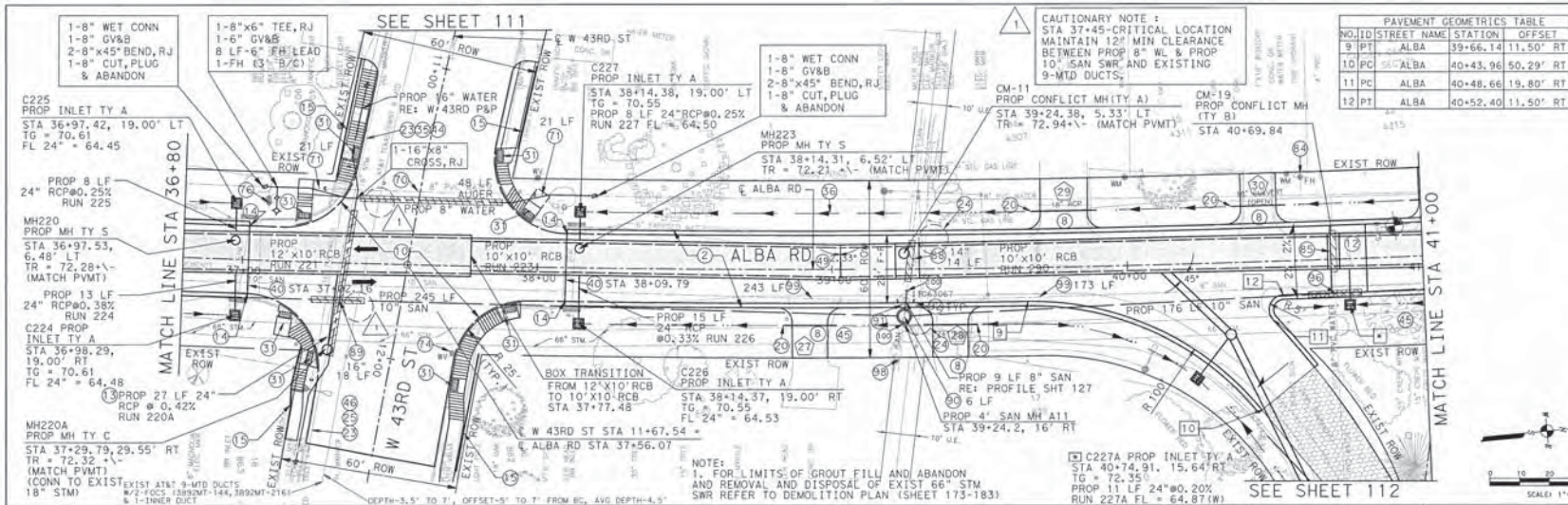
CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND
 SHEPHERD PARK (CENTRAL)
 DRAINAGE AND PAVING

ALBA RD
 PLAN & PROFILE
 STA 29+40 TO STA 33+00

WBS NUMBER	M-000285-0001-4
DRAWING SCALE	HORIZ. 1"=20' VERT. 1"=2'
CITY OF HOUSTON PM	JEFFREY T. HALL, P.E.
SHEET NO. 79 OF 385	

DATE: 04/16/2015 3:02:05 PM
 PROJECT: M-000285-0001-0002 DRAWING: PLAN AND PROFILE.dwg



- NOTES:**
- FOR HORIZONTAL ALIGNMENT DATA, SEE GEOMETRIC DATA SUMMARY. (SHEET NO. 5-9).
 - CURB INLETS & PAVEMENT CALLOUTS ARE TO FACE OF CURB OR EDGE OF PAVT UNLESS NOTED OTHERWISE.
 - REFER TO CROSS STREET PLAN AND PROFILE SHEETS FOR SIDE STREET DRAINAGE AND PAVING INFORMATION.
 - REFER TO DEMOLITION PLAN, (SHEET NO. 173-183) FOR STORM REMOVAL LIMITS IN ACCORDANCE WITH COH STD SPEC SECTION 02221, AND PAVEMENT REMOVAL LIMITS.

LEGEND

- DRIVEWAY NUMBER (SEE DRIVEWAY TABLE SHEET FOR MORE INFORMATION)
- PROP LIMITS OF ASPHALT TRANSITION PAVEMENT

ITEM: PNT. NO. 17
 SET 5A MARK LOCATED ON THE STA 37+13.73, 20.72' RT ALBA ST. STA 11+94.82, 39.01' RT W. 43RD ST. STA 72+12.22.

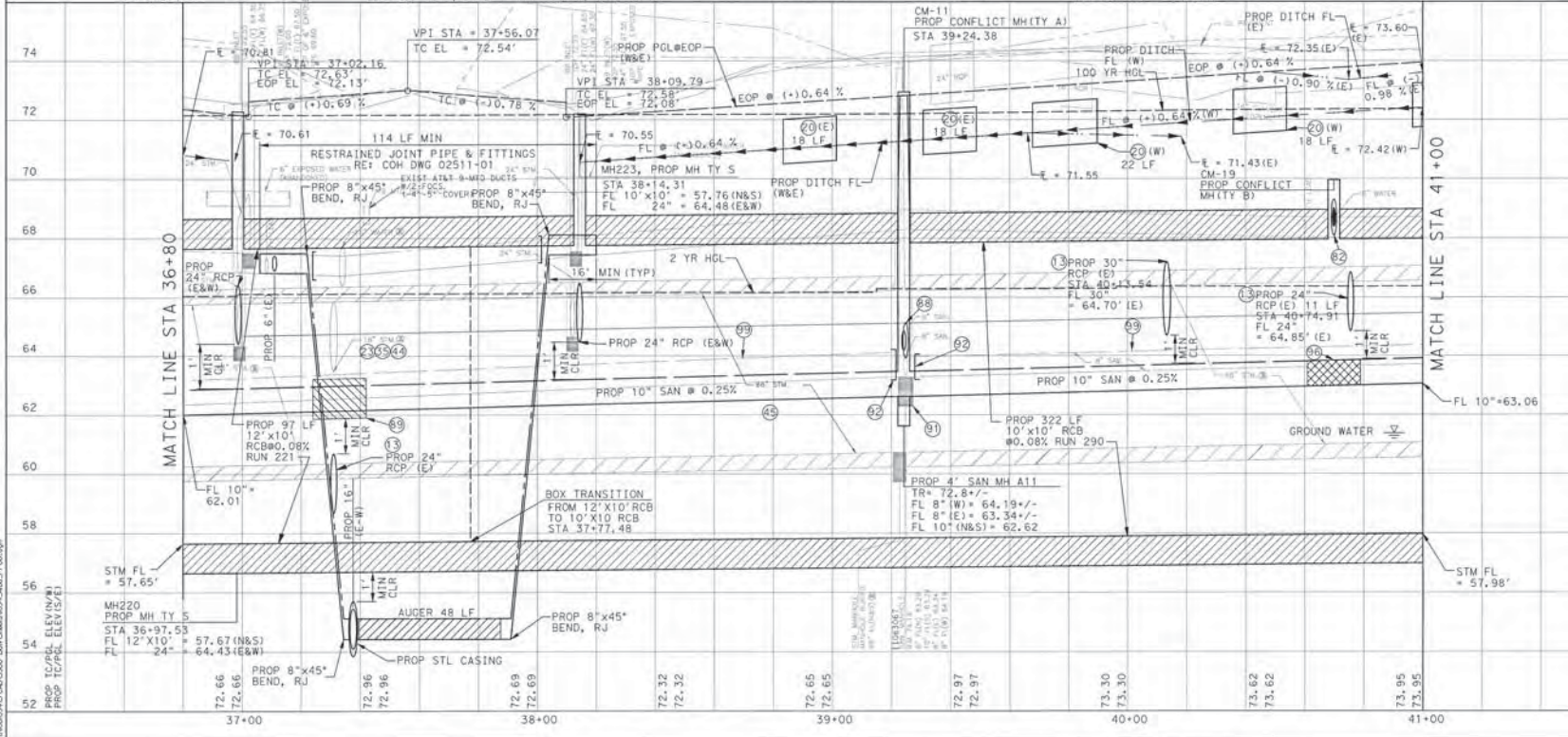
PROJECT BENCHMARK DATA:
 CITY OF HOUSTON MONUMENT NO. 5260-8208, A TYPE 8A MARK LOCATED ON THE NORTHEAST CORNER OF ALBA ROAD AND SUE BARNETT DRIVE. ELEVATION = 74.48' (NAVORS/CORS 2011 ADJ.).

TO ARRANGE FOR LINES TO BE TURNED OFF OR MOVED, CALL CENTERPOINT AT 713-207-2222.

PRIVATE UTILITY LINES SHOWN
 AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.W. OR EASEMENTS CALL THE LOW VOLT VERIFICATION 713-221-4547.

APPROVED FOR ATAT TRANSMIT UNDERGROUND CONDUIT FACILITIES ONLY
 SIGNATURE VALID FOR ONE YEAR

APPROVED FOR ATAT TRANSMIT UNDERGROUND CONDUIT FACILITIES ONLY
 SIGNATURE VALID FOR ONE YEAR



SDPS
 Houston Storm Drainage Program Support

PGAL
 3131 BRANIFF, SUITE 200
 Houston, Texas 77062
 Phone (713) 622-1444
 Fax (713) 968-9333

CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

**ALBA RD
 PLAN & PROFILE
 STA 36+80 TO STA 41+00**

WDS NUMBER
 M-000285-0001-4

DRAWING SCALE
 HORIZ. 1"=20' VERT. 1"=2'

CITY OF HOUSTON PM
 JEFFREY T. HALL, P.E.

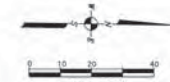
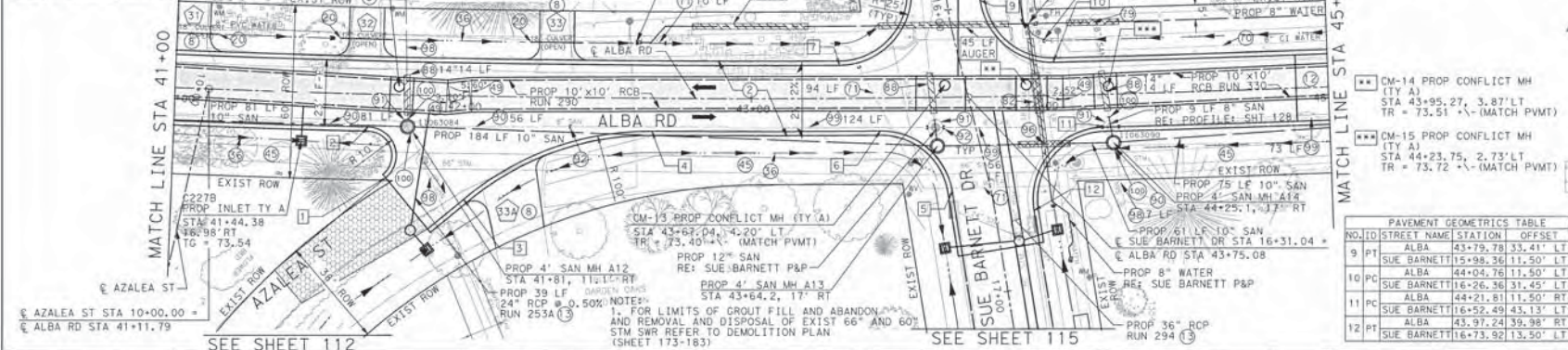
SHEET NO. 81 OF 385

55630

DATE: 06/19/2005 8:23:44 AM
 W:\000285\CAD\DWG\02221-DRAIN\CONV\02221-DRAIN-PLAN-81.DWG

PAVEMENT GEOMETRICS TABLE			
NO.	STREET NAME	STATION	OFFSET
1	PT ALBA	41+73.83	29.08' RT
2	PC AZALEA ST	10+16.44	66.70' LT
3	PC ALBA	41+67.34	11.50' RT
4	PT AZALEA ST	10+00.40	56.79' LT
5	PC ALBA	42+00.91	36.05' RT
6	PC AZALEA ST	10+17.76	94.81' LT
7	PC ALBA	42+65.60	11.50' RT
8	PT AZALEA ST	9+79.22	153.06' LT

PAVEMENT GEOMETRICS TABLE			
NO.	STREET NAME	STATION	OFFSET
5	PT ALBA	43+69.10	32.76' RT
6	PC SUE BARNETT	16+61.62	13.18' RT
7	PC ALBA	43+44.59	11.50' RT
8	PT SUE BARNETT	16+35.32	32.37' RT
9	PC ALBA	43+30.63	11.50' RT
10	PC SUE BARNETT	16+09.73	40.62' RT
11	PC ALBA	43+55.61	39.71' LT
12	PT SUE BARNETT	15+89.09	11.50' RT



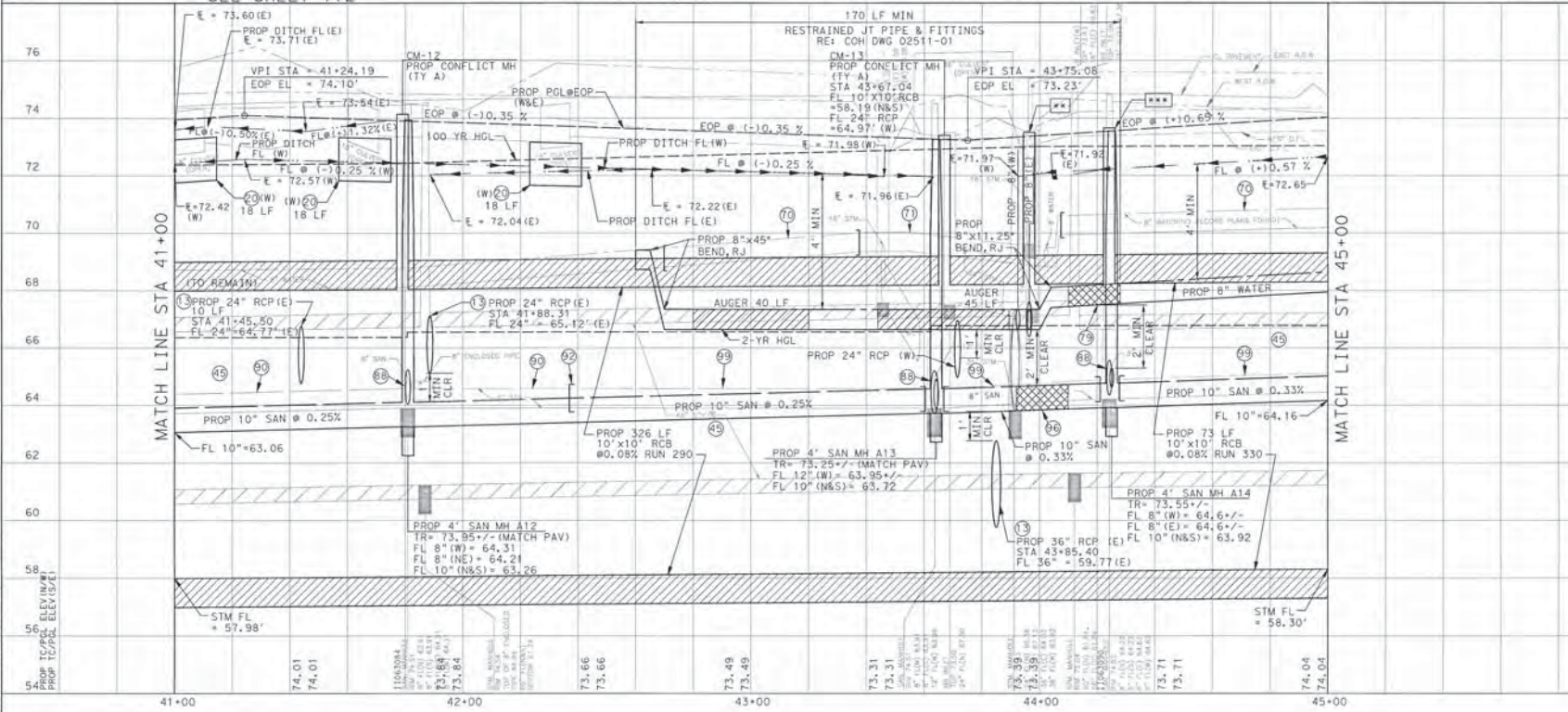
- NOTES:**
- FOR HORIZONTAL ALIGNMENT DATA, SEE GEOMETRIC DATA SUMMARY. (SHEET NO. 5-9).
 - CURB INLETS & PAVEMENT CALLOUTS ARE TO FACE OF CURB OR EDGE OF PAVT UNLESS NOTED OTHERWISE.
 - REFER TO CROSS STREET PLAN AND PROFILE SHEETS FOR SIDESTREET DRAINAGE AND PAVING INFORMATION.
 - REFER TO DEMOLITION PLAN, (SHEET NO. 173-183) FOR STORM REMOVAL LIMITS IN ACCORDANCE WITH COH STD SPEC SECTION 02221. AND PAVEMENT REMOVAL LIMITS.

LEGEND

DRIVEWAY NUMBER (SEE DRIVEWAY TABLE SHEET FOR MORE INFORMATION)

PROF LIMITS OF ASPHALT TRANSITION PAVEMENT

PAVEMENT GEOMETRICS TABLE			
NO.	STREET NAME	STATION	OFFSET
9	PT ALBA	43+79.78	33.41' LT
10	PC SUE BARNETT	15+98.36	11.50' LT
11	PC ALBA	44+04.76	11.50' LT
12	PC SUE BARNETT	16+26.38	31.45' LT
13	PC ALBA	44+21.81	11.50' RT
14	PC SUE BARNETT	16+52.49	43.13' LT
15	PC ALBA	43+97.24	39.98' RT
16	PT SUE BARNETT	16+73.92	13.50' LT



DATE: 10-20-15
 DATE: 10-20-15
 DATE: 10-20-15

APPROVED FOR AT&T/TELECOM UNDERGROUND CONDUIT FACILITIES ONLY. THIS SIGNATURE VERIFIES EXISTING UNDERGROUND FACILITIES NOT TO BE USED FOR CONFLICT VERIFICATION. I (AS SERVICE LINES ARE NOT SHOWN) SIGNATURE VALID FOR 1 YEAR.

APPROVED FOR AT&T/TELECOM UNDERGROUND CONDUIT FACILITIES ONLY. THIS SIGNATURE VERIFIES EXISTING UNDERGROUND FACILITIES NOT TO BE USED FOR CONFLICT VERIFICATION. I (AS SERVICE LINES ARE NOT SHOWN) SIGNATURE VALID FOR 1 YEAR.

APPROVED FOR AT&T/TELECOM UNDERGROUND CONDUIT FACILITIES ONLY. THIS SIGNATURE VERIFIES EXISTING UNDERGROUND FACILITIES NOT TO BE USED FOR CONFLICT VERIFICATION. I (AS SERVICE LINES ARE NOT SHOWN) SIGNATURE VALID FOR 1 YEAR.

SDPS
Houston Storm Drainage Program Support

PGAL
3131 BRINDLEY, SUITE 200
HOUSTON, TEXAS 77042
PHONE (713) 621-1444
FAX (713) 968-9333

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

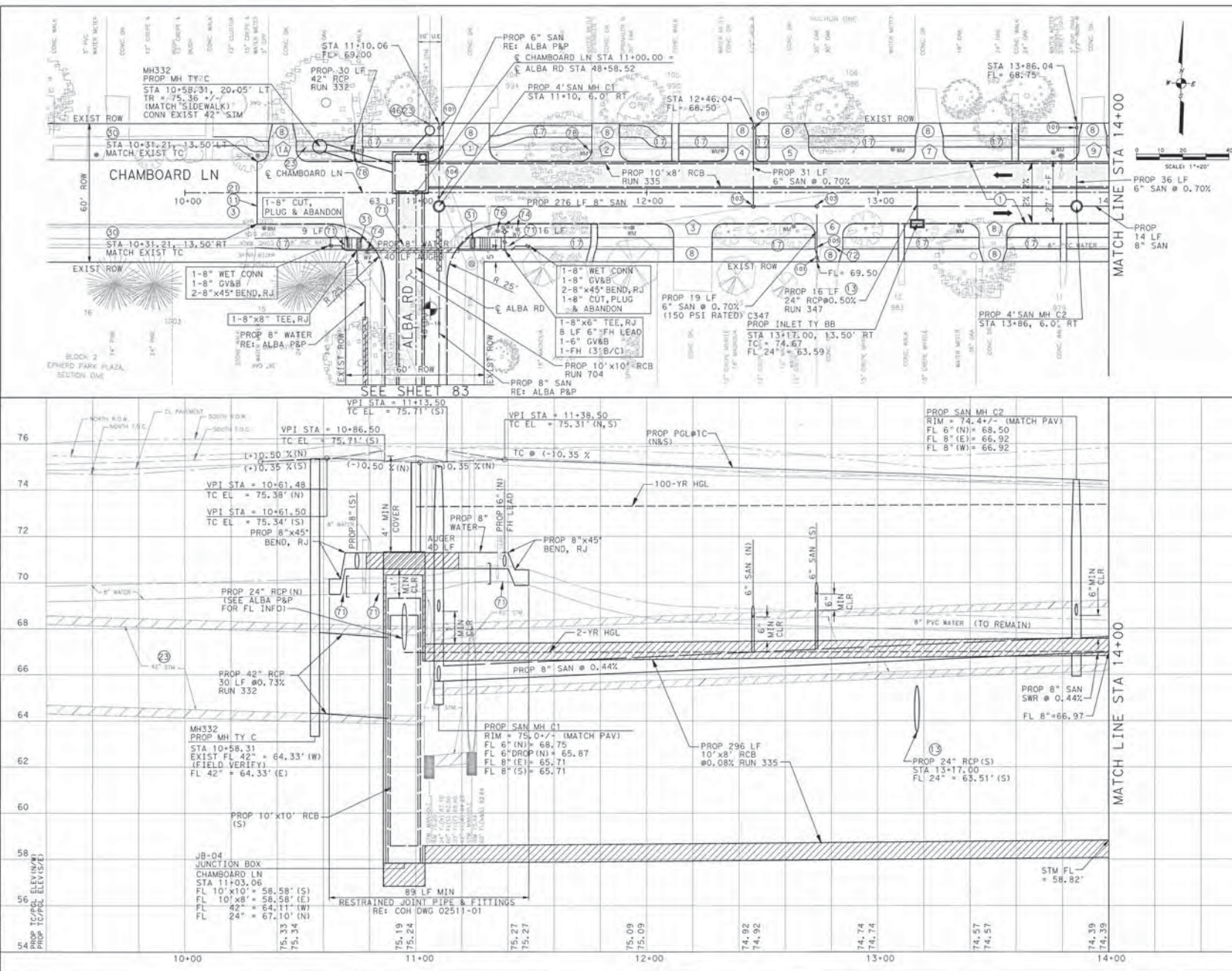
GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

ALBA RD
PLAN & PROFILE
STA 41+00 TO STA 45+00

WBS NUMBER	M-000285-0001-4
DRAWING SCALE	HORIZ. 1"=20' VERT. 1"=2'
CITY OF HOUSTON PW	JEFFREY T. HALL, P.E.
SHEET NO.	82 OF 385

DATE: 04/06/2005 2:03:30 PM
 DRAWING: C:\WORK\2005\20050406\050406.dwg

DATE: 09/20/2025 6:08:38 AM A:\WORKING\54010000_DRAIN\DWG\04_Chamboard_Plan.dwg



NOTES:

- FOR HORIZONTAL ALIGNMENT DATA, SEE GEOMETRIC DATA SUMMARY, (SHEET NO. 5-9).
- CURB INLETS & PAVEMENT CALLOUTS ARE TO FACE OF CURB OR EDGE OF PAVT UNLESS NOTED OTHERWISE.
- REFER TO CROSS STREET PLAN AND PROFILE SHEETS FOR SIDEWALK DRAINAGE AND PAVING INFORMATION.
- REFER TO DEMOLITION PLAN, (SHEET NO. 173-183) FOR STORM REMOVAL LIMITS IN ACCORDANCE WITH COH STD SPEC SECTION 02221, AND PAVEMENT REMOVAL LIMITS.

LEGEND

DRIVEWAY NUMBER (SEE DRIVEWAY TABLE SHEET FOR MORE INFORMATION)

PROP LIMITS OF ASPHALT TRANSITION PAVEMENT

TRM: PNT, NO. 20
FND 3/8" IR W/CAP
STA 48+93.00, 19.78' RT ALBA ST.
STA 11+19.78, 25.49' RT CHAMBOARD LN.
ELEV. & 75.47

PROJECT BENCHMARK DATA:

CITY OF HOUSTON MONUMENT NO. 5260-8208, A TYPE 4A MARK LOCATED ON THE NORTHEAST CORNER OF ALBA ROAD AND SUE BARNETT DRIVE, ELEVATION = 74.48' (NAVD83/COORDS 2011 ADJ.)

TO ARRANGE FOR LINES TO BE TURNED OFF OR MOVED, CALL CENTERPOINT AT 713-207-2222.

PRIVATE UTILITY LINES SHOWN

AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.W. OR EASEMENTS CALL THE ONE CALL NOTIFICATION 713-233-4567.

CONDUCTOR VERIFY UNDERGROUND ELECTRIC FACILITIES VERIFICATION ONLY.
THIS SIGNATURE VERIFIED EXISTING UNDERGROUND FACILITIES NOT TO BE USED FOR CONFLICT VERIFICATION. SIGNATURE VALID FOR SIX MONTHS.

SDPS
Houston Storm Drainage Program Support

PGAL
TYPE RES NO. F-2942
3131 BIRMGHAM, SUITE 200
HOUSTON, TEXAS 77042
PHONE (713) 822-1444
FAX (713) 988-9333

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

CHAMBOARD LN
PLAN & PROFILE
BEGIN TO STA 14+00

WBS NUMBER
M-000285-0001-4

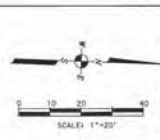
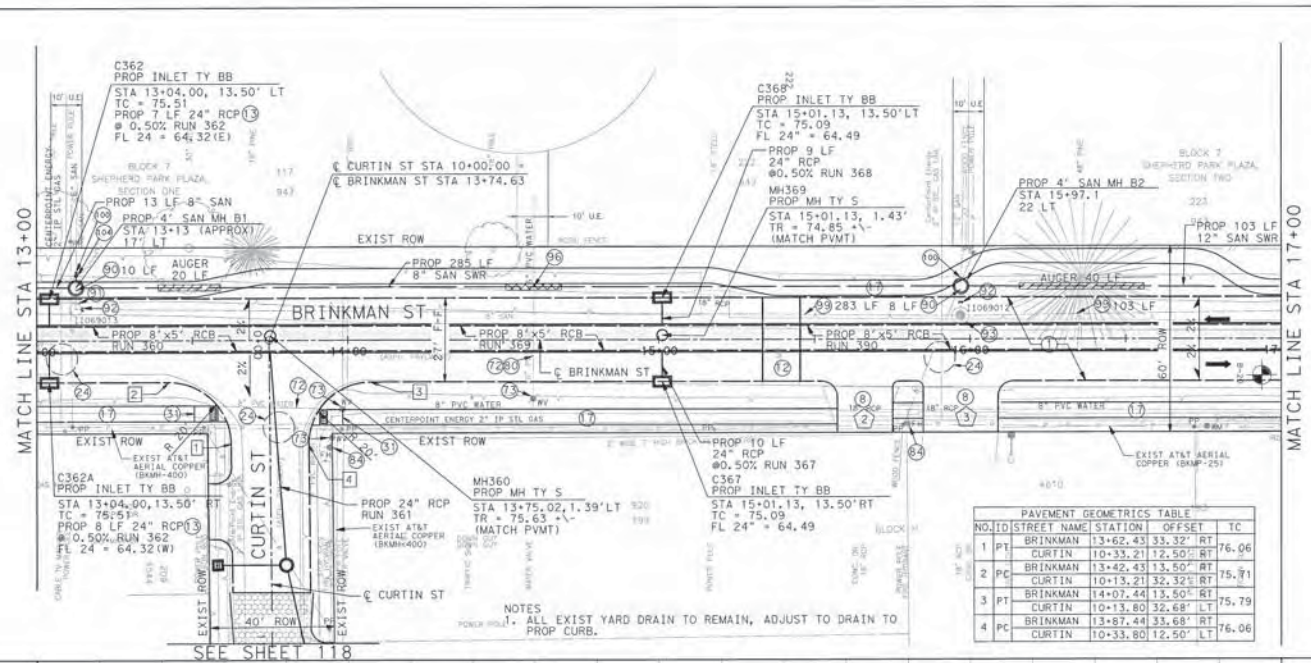
DRAWING SCALE
HORIZ. 1"=20' VERT. 1"=2'

CITY OF HOUSTON PW
JEFFREY T. HALL, P.E.

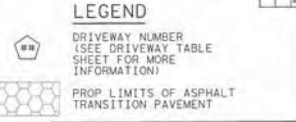
SHEET NO. 84 OF 385

55630

DATE: 10/20/2015 6:00:00 AM
 M:\0000045\0400000\DWG\StormDrain\Brinkman_PFD.dwg



- NOTES:**
- FOR HORIZONTAL ALIGNMENT DATA, SEE GEOMETRIC DATA SUMMARY. (SHEET NO. 5-9).
 - CURB INLETS & PAVEMENT CALLOUTS ARE TO FACE OF CURB OR EDGE OF PAVT UNLESS NOTED OTHERWISE.
 - REFER TO CROSS STREET PLAN AND PROFILE FOR INFORMATION ON SIDEWALK DRAINAGE AND PAVING INFORMATION.
 - REFER TO DEMOLITION PLAN, (SHEET NO. 173-103) FOR STORM REMOVAL LIMITS IN ACCORDANCE WITH COM STD SPEC SECTION 0221, AND PAVEMENT REMOVAL LIMITS.



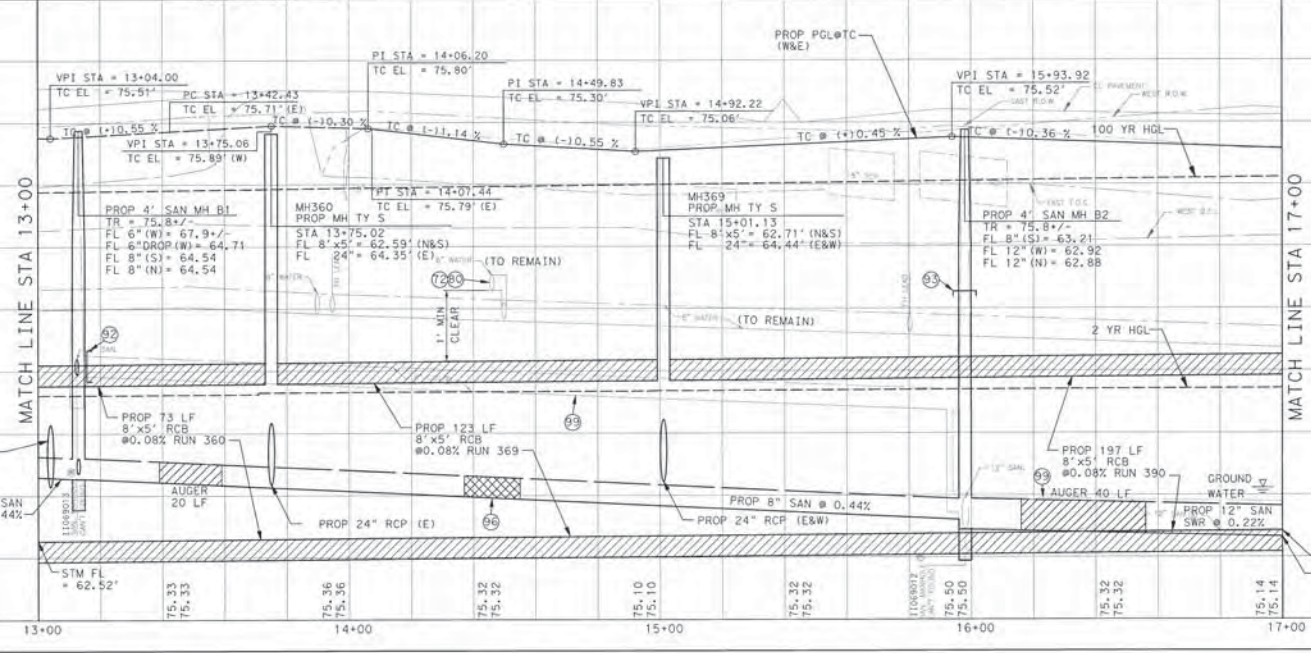
TM&M PNT. NO. 23
 SET MAG NAIL W/SHINER
 STA 13+49.43, 12.37' AT BRINKMAN ST.
 ELEV. = 76.84

PROJECT BENCHMARK DATA:
 CITY OF HOUSTON MONUMENT NO. 5260-8208,
 A TYPE 44 MARK LOCATED ON THE
 NORTHEAST CORNER OF ALBA ROAD AND
 SUS BARNETT DRIVE. ELEVATION = 74.48'
 (NAVD88/COORDS 2011 ADJ. 1)

PAVEMENT GEOMETRICS TABLE

NO.	STREET NAME	STATION	OFFSET	RT	TC
1	PI	BRINKMAN	13+62.43	33.32'	76.06
2	PC	BRINKMAN	13+42.43	13.50'	75.71
3	PT	BRINKMAN	14+07.44	13.50'	75.79
4	PC	CURTIN	10+33.80	12.50'	76.06

NOTES
 1. ALL EXIST YARD DRAIN TO REMAIN, ADJUST TO DRAIN TO PROP CURB.



ARRANGE FOR LINES TO BE TURNED OFF OR MOVED, CALL CENTERPOINT AT 713-207-2222.

PRIVATE UTILITY LINES SHOWN
 AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.W. OR EASEMENTS CALL THE ONE STOP NOTIFICATION 713-223-0867.

DATE: 10-1-15
 SIGNATURE: [Signature]
 CHECKPOINT UNDERGROUND GAS FACILITIES VERIFICATION ONLY. (THIS SIGNATURE VERIFIES THAT YOU HAVE SHOWN CMP NATURAL GAS LINES CORRECTLY. NOT TO BE USED FOR CONFLICT VERIFICATION.) THIS SERVICE LINES ARE NOT SHOWN. SIGNATURE VALID FOR SIX MONTHS.

DATE: 10-1-15
 SIGNATURE: [Signature]
 APPROVED FOR AT&T TEXAS/SMY UNDERGROUND CONDUIT FACILITIES ONLY. SIGNATURE VALID FOR ONE YEAR.

DATE: 10-1-15
 SIGNATURE: [Signature]
 IDENTIFY AND/OR BACKGROUND ELECTRICAL FACILITIES VERIFICATION ONLY. (THIS SIGNATURE VERIFIES EXISTING UNDERGROUND FACILITIES. NOT TO BE USED FOR CONFLICT VERIFICATION.) SIGNATURE VALID FOR SIX MONTHS.

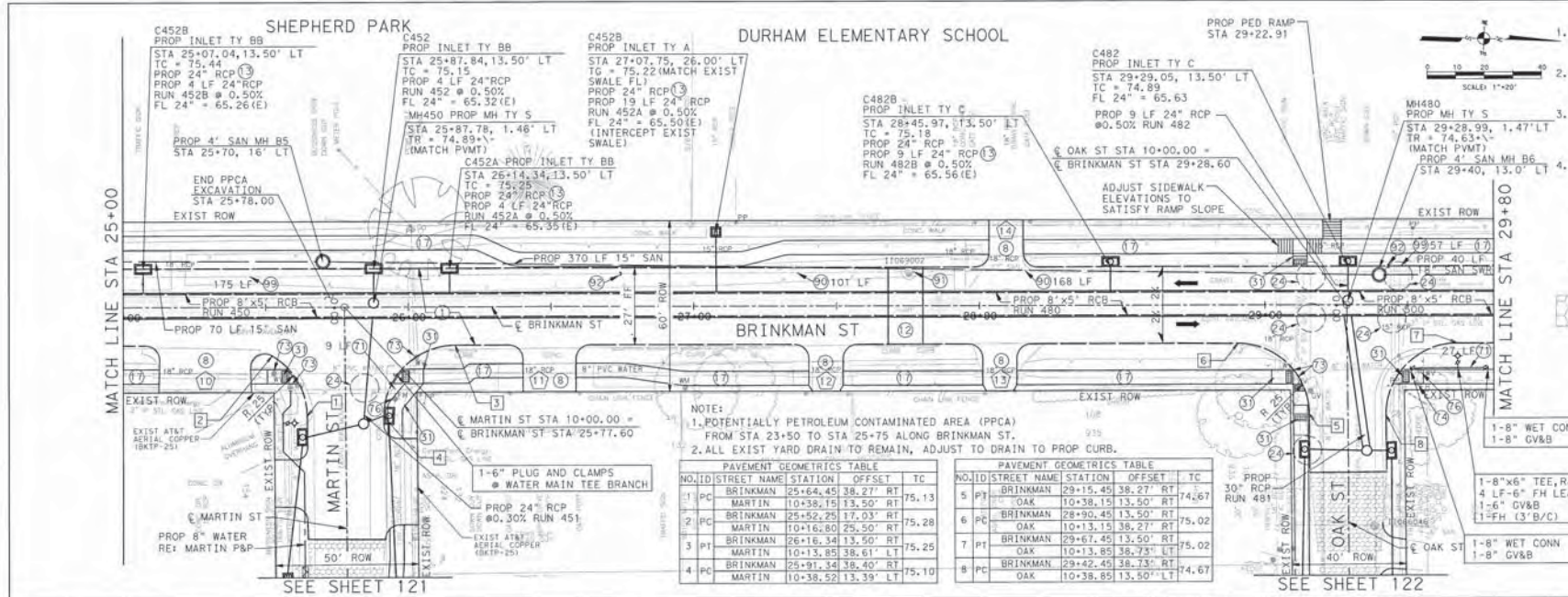


CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING
 BRINKMAN ST
 PLAN & PROFILE
 STA 13+00 TO STA 17+00

WBS NUMBER
 M-000285-0001-4
 DRAWING SCALE
 HORIZ. 1"=30' VERT. 1"=2'
 CITY OF HOUSTON PM
 JEFFREY T. HALL, P.E.
 SHEET NO. 88 OF 395





- NOTES:**
- FOR HORIZONTAL ALIGNMENT DATA, SEE GEOMETRIC DATA SUMMARY. (SHEET NO. 5-9).
 - CURB INLETS & PAVEMENT CALLOUTS ARE TO FACE OF CURB OR EDGE OF PAVT UNLESS NOTED OTHERWISE.
 - REFER TO CROSS STREET PLAN AND PROFILE SHEETS FOR SIDE STREET DRAINAGE AND PAVING INFORMATION.
 - REFER TO DEMOLITION PLAN, (SHEET NO. 173-183) FOR STORM REMOVAL LIMITS IN ACCORDANCE WITH COH STD SPEC SECTION 02221, AND PAVEMENT REMOVAL LIMITS.

- LEGEND**
- DRIVEWAY NUMBER (SEE DRIVEWAY TABLE SHEET FOR MORE INFORMATION)
 - PROP LIMITS OF ASPHALT TRANSITION PAVEMENT

TBM: PNT. NO. 27
 SET 3/8" IR W/CAP
 STA 29+29.05, 13.50' LT
 ELEV. = 75.47

PROJECT BENCHMARK DATA:
 CITY OF HOUSTON MONUMENT NO. 5260-8208,
 A TYPE MARK LOCATED ON THE
 NORTHEAST CORNER OF ALBA ROAD AND
 SUE BARNETT DRIVE. ELEVATION = 74.48'
 (NAVDS/CORS 2011 ADJ.)

TO ARRANGE FOR LINES TO BE TURNED OFF OR MOVED, CALL CENTERPOINT AT 713-201-2222.

PRIVATE UTILITY LINES SHOWN
 AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET AND/OR EXISTING CALL THE LONG STAR NOTIFICATION 713-223-0667.

DATE: 10-20-16
 SIGNATURE: [Signature]

DATE: 10-20-16
 SIGNATURE: [Signature]

APPROVED FOR AT&T TELECOM/STORM UNDERGROUND CONDUIT FACILITIES ONLY.
 SIGNATURE VALID FOR ONE YEAR.

DATE: 10-20-16
 SIGNATURE: [Signature]

DATE: 10-20-16
 SIGNATURE: [Signature]

SDPS
 Houston Storm Drainage Program Support

PGAL
 3131 BRANBARK, SUITE 200
 HOUSTON, TEXAS 77058
 Phone (713) 622-1444
 Fax (713) 969-9333

STATE OF TEXAS
 COSTA K. GERARDINO
 REGISTERED PROFESSIONAL ENGINEER
 NO. 10421

CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

BRINKMAN ST
 PLAN & PROFILE
 STA 25+00 TO STA 29+80

WBS NUMBER
 M-000285-0001-4

DRAWING SCALE
 HORIZ. 1"=20' VERT. 1"=2'

CITY OF HOUSTON PM
 JEFFREY T. HALL, P.E.

SHEET NO. 91 OF 385

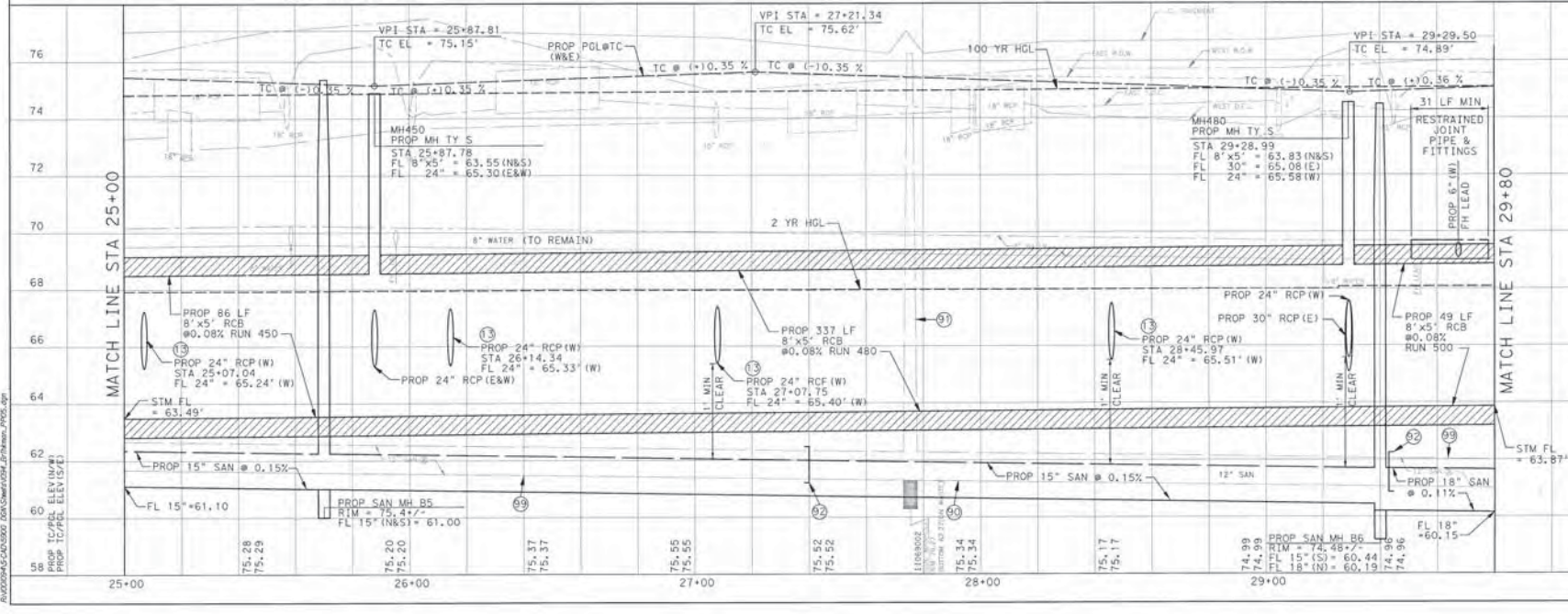
- NOTE:**
- POTENTIALLY PETROLEUM CONTAMINATED AREA (PPCA) FROM STA 23+50 TO STA 25+75 ALONG BRINKMAN ST.
 - ALL EXIST YARD DRAIN TO REMAIN, ADJUST TO DRAIN TO PROP CURB.

PAVEMENT GEOMETRICS TABLE

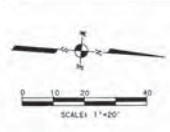
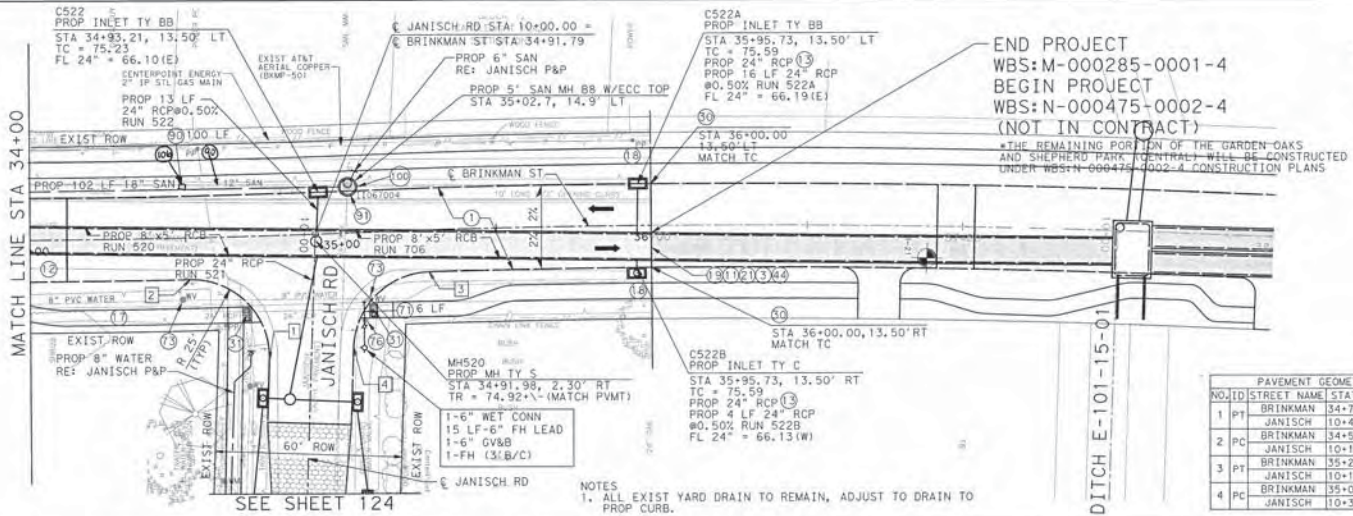
NO.	ID	STREET NAME	STATION	OFFSET	TC
1	PC	BRINKMAN	25+64.45	38.27'	RT
2	PC	MARTIN	10+36.15	13.50'	RT
3	PT	BRINKMAN	25+52.25	17.03'	RT
4	PC	MARTIN	10+16.80	25.50'	RT
5	PT	BRINKMAN	29+15.45	38.27'	RT
6	PC	BRINKMAN	28+90.45	13.50'	RT
7	PT	OAK	10+13.85	38.27'	LT
8	PC	BRINKMAN	29+42.45	38.27'	RT

PAVEMENT GEOMETRICS TABLE

NO.	ID	STREET NAME	STATION	OFFSET	TC
5	PT	BRINKMAN	29+15.45	38.27'	RT
6	PC	BRINKMAN	28+90.45	13.50'	RT
7	PT	OAK	10+13.85	38.27'	LT
8	PC	BRINKMAN	29+42.45	38.27'	RT



DATE: 10-20-16
 DRAWN: JAC/026
 CHECKED: JAC/026
 DESIGNED: JAC/026
 PROJECT: 16030



END PROJECT
 WBS:M-000285-0001-4
 BEGIN PROJECT
 WBS:N-000475-0002-4
 (NOT IN CONTRACT)
 *THE REMAINING PORTION OF THE GARDEN OAKS
 AND SHEPHERD PARK CENTRAL WILL BE CONSTRUCTED
 UNDER WBS:N-000475-0002-4 CONSTRUCTION PLANS

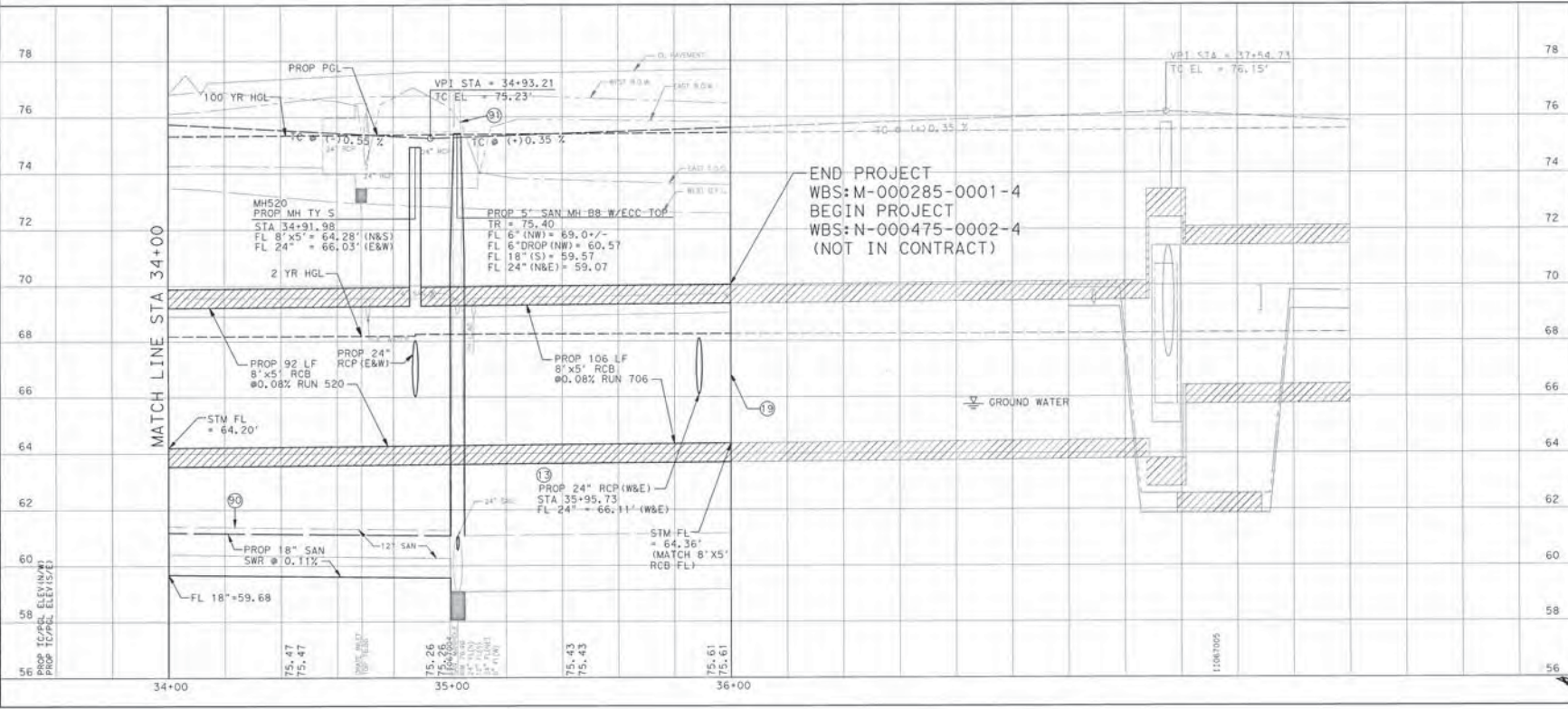
- NOTES:**
- FOR HORIZONTAL ALIGNMENT DATA, SEE GEOMETRIC DATA SUMMARY. (SHEET NO. 5-9).
 - CURB INLETS & PAVEMENT CALLOUTS ARE TO FACE OF CURB OR EDGE OF PAVT UNLESS NOTED OTHERWISE.
 - REFER TO CROSS STREET PLAN AND PROFILE SHEETS FOR SIDESTREET DRAINAGE AND PAVING INFORMATION.
 - REFER TO DEMOLITION PLAN, (SHEET NO. 173-183) FOR STORM REMOVAL LIMITS IN ACCORDANCE WITH COH STD SPEC SECTION 02221, AND PAVEMENT REMOVAL LIMITS.

- LEGEND**
- DRIVEWAY NUMBER (SEE DRIVEWAY TABLE SHEET FOR MORE INFORMATION)
 - PROP LIMITS OF ASPHALT TRANSITION PAVEMENT

PAVEMENT GEOMETRICS TABLE					
NO.	ID	STREET NAME	STATION	OFFSET	TC
1	PT	BRINKMAN	34+75.95	40.01' RT	75.06
2	PC	JANISCH	10+40.80	13.50' RT	75.47
3	PT	BRINKMAN	34+51.18	13.52' RT	75.47
4	PC	JANISCH	10+15.84	39.80' RT	75.47
5	PT	BRINKMAN	35+28.09	13.50' RT	75.36
6	PC	JANISCH	10+11.13	36.90' RT	75.10
7	PC	BRINKMAN	35+03.19	36.90' RT	75.10

- NOTES**
- ALL EXIST YARD DRAIN TO REMAIN, ADJUST TO DRAIN TO PROP CURB.

SEE SHEET 124



END PROJECT
 WBS:M-000285-0001-4
 BEGIN PROJECT
 WBS:N-000475-0002-4
 (NOT IN CONTRACT)

TBM: PNT. NO. 29
 SET COTTON SPINDLE
 STA 35+05.45, 14.63' RT BRINKMAN ST.
 STA 10+13.57, 14.44' LT JANISCH RD.
 ELEV. = 76.98

PROJECT BENCHMARK DATA:

CITY OF HOUSTON MONUMENT NO. 5260-8208,
 A TYPE 44 MARK LOCATED ON THE
 NORTHEAST CORNER OF ALBA ROAD AND
 SUE BARNETT DRIVE. ELEVATION = 74.48'
 (NAV88/COGS 2011 ADJ.)

TO ARRANGE FOR LINES TO BE TURNED OFF OR
 MOVED, CALL CENTERPOINT AT 713-207-2222.

PRIVATE UTILITY LINES SHOWN
 AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET P.L.O.W. OR
 EXCAVATION CALL THE ONE CALL NOTIFICATION 713-222-4641.

DATE: 10-1-15
 DATE: 10-1-15
 DATE: 10-1-15

APPROVED FOR AT&T TEXAS/INT UNDERGROUND CONDUIT
 FACILITIES ONLY.
 SIGNATURE VALID FOR ONE YEAR

APPROVED FOR AT&T TEXAS/INT UNDERGROUND CONDUIT
 FACILITIES ONLY.
 THIS SIGNATURE VERIFIES THAT YOU HAVE SHOWN ON NATURAL
 GAS LINES CORRECTLY NOT TO BE USED FOR CONFLICT
 VERIFICATION. (GAS SERVICE LINES ARE NOT SHOWN.)
 SIGNATURE VALID FOR SIX MONTHS.

SDPS
 Houston Storm Drainage
 Program Support

PGAL
 3131 SHEPHERD PARK, SUITE 200
 HOUSTON, TEXAS 77062
 PHONE (713) 828-1444
 FAX (713) 998-9333

STATE OF TEXAS
 COUNTY CLERK
 CLERK'S OFFICE
 1001 RICE AVENUE
 HOUSTON, TEXAS 77001

CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND
 SHEPHERD PARK (CENTRAL)
 DRAINAGE AND PAVING

BRINKMAN ST
 PLAN & PROFILE
 STA 34+00 TO END

WBS NUMBER	M-000285-0001-4
DRAWING SCALE	HORIZ. 1"=20' VERT. 1"=2'
CITY OF HOUSTON PM	JEFFREY T. HALL, P.E.
SHEET NO. 93 OF 385	55830

DATE: 09/20/2015 7:00:07 AM
 \\PROD095\G000000000\DWG\CON\009\009\Brinkman_Plan_Profile.dwg

- NOTES:
1. REGRADE DITCH WHERE EXISTING DITCH IS DISTURBED BY PROPOSED STRUCTURES.
 2. ALL EXIST YARD DRAIN TO REMAIN. ADJUST TO DRAIN TO REGRADED DITCH FL (AT NO SEPARATE RAY).
 3. REFER TO PAVEMENT REPAIR DETAILS FOR STREET CUTS. COH DWG NO: 02902-01 FOR LATERAL STORM SEWER CONSTRUCTION WORK.

- NOTES:
1. FOR HORIZONTAL ALIGNMENT DATA, SEE GEOMETRIC DATA SUMMARY. (SHEET NO. 5-9).
 2. CURB INLETS & PAVEMENT CALLOUTS ARE TO FACE OF CURB OR EDGE OF PAVT UNLESS NOTED OTHERWISE.
 3. REFER TO CROSS STREET PLAN AND PROFILE SHEETS FOR DETAILS OF SIDE STREET DRAINAGE AND PAVING INFORMATION.
 4. REFER TO DEMOLITION PLAN, (SHEET NO. 173-183) FOR STORM REMOVAL LIMITS IN ACCORDANCE WITH COM STD SPEC SECTION 02221, AND PAVEMENT REMOVAL LIMITS.

- LEGEND
- DRIVEWAY NUMBER (SEE DRIVEWAY TABLE SHEET FOR MORE INFORMATION)
 - PROF LIMITS OF ASPHALT TRANSITION PAVEMENT

TEMP PNT. NO. 12
SET COTTON SPINDLE
STA 12+81.87, 21.02+
STA 14+83.63, 18.38+
ELEV. = 70.75

PROJECT BENCHMARK DATA:
CITY OF HOUSTON MONUMENT NO. 5260-8208,
A TYPE 4A MARK LOCATED ON THE
NORTHEAST CORNER OF ALBA ROAD AND
SUE BARNETT DRIVE. ELEVATION = 74.48'
(NAD83/CGO3 2011 ADJ.)

TO ARRANGE FOR LINES TO BE TURNED OFF OR MOVED, CALL CENTERPOINT AT 713-201-2222.

PRIVATE UTILITY LINES SHOWN
AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET P.O.W. OR
EASEMENTS CALL THE LONG STAR NOTIFICATION 713-223-6867.

APPROVED FOR AT&T TRANSMIT UNDERGROUND CONDUIT FACILITIES ONLY.
SIGNATURE VALID FOR ONE YEAR.

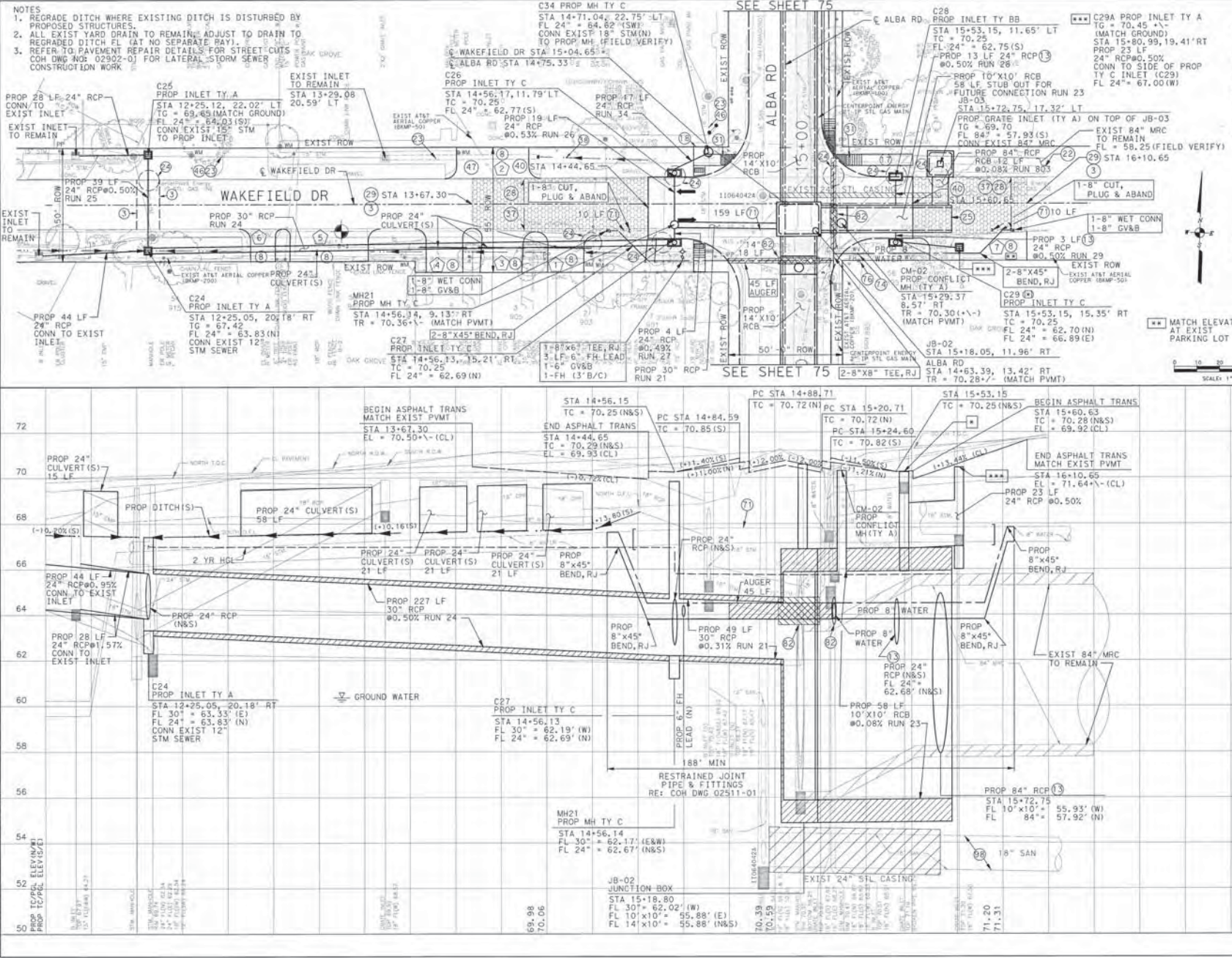
SDPS
Houston Storm Drainage Program Support

PGAL
3133 BROADWAY, SUITE 200
HOUSTON, TEXAS 77042
PHONE (713) 822-1444
FAX (713) 968-9333

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

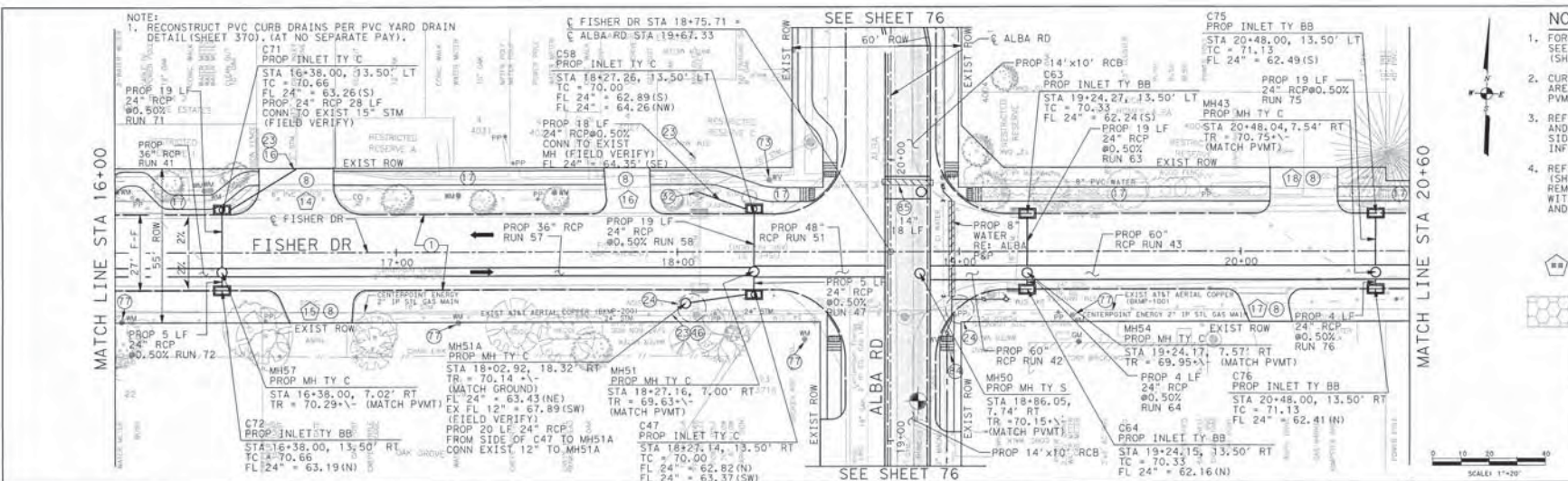
GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING
WAKEFIELD DR PLAN & PROFILE

WBS NUMBER	M-000285-0001-4
DRAWING SCALE	HORIZ. 1"=20' VERT. 1"=2'
CITY OF HOUSTON PW	JEFFREY T. HALL, P. E.
SHEET NO. 95 OF 395	

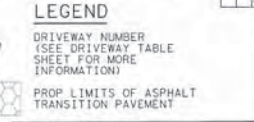


DATE: 9/30/2025 7:00 AM
W:\000005\02902\DWG\02902-01\PLAN\02902-01-95.dwg

DATE: 06/06/2018 3:43:41 PM
 DRAWING: S:\00000545\00000545.DWG (PLOT) / JHW_P102.DWG



- NOTES:**
- FOR HORIZONTAL ALIGNMENT DATA, SEE GEOMETRIC DATA SUMMARY. (SHEET NO. 5-9).
 - CURB INLETS & PAVEMENT CALLOUTS ARE TO FACE OF CURB OR EDGE OF PAVMT UNLESS NOTED OTHERWISE.
 - REFER TO CROSS STREET PLAN AND PROFILE SHEETS FOR SCHEDULED DRAINAGE AND PAVING INFORMATION.
 - REFER TO DEMOLITION PLAN, (SHEET NO. 173-183) FOR STORM REMOVAL LIMITS IN ACCORDANCE WITH CON STD SPEC SECTION 02221, AND PAVEMENT REMOVAL LIMITS.

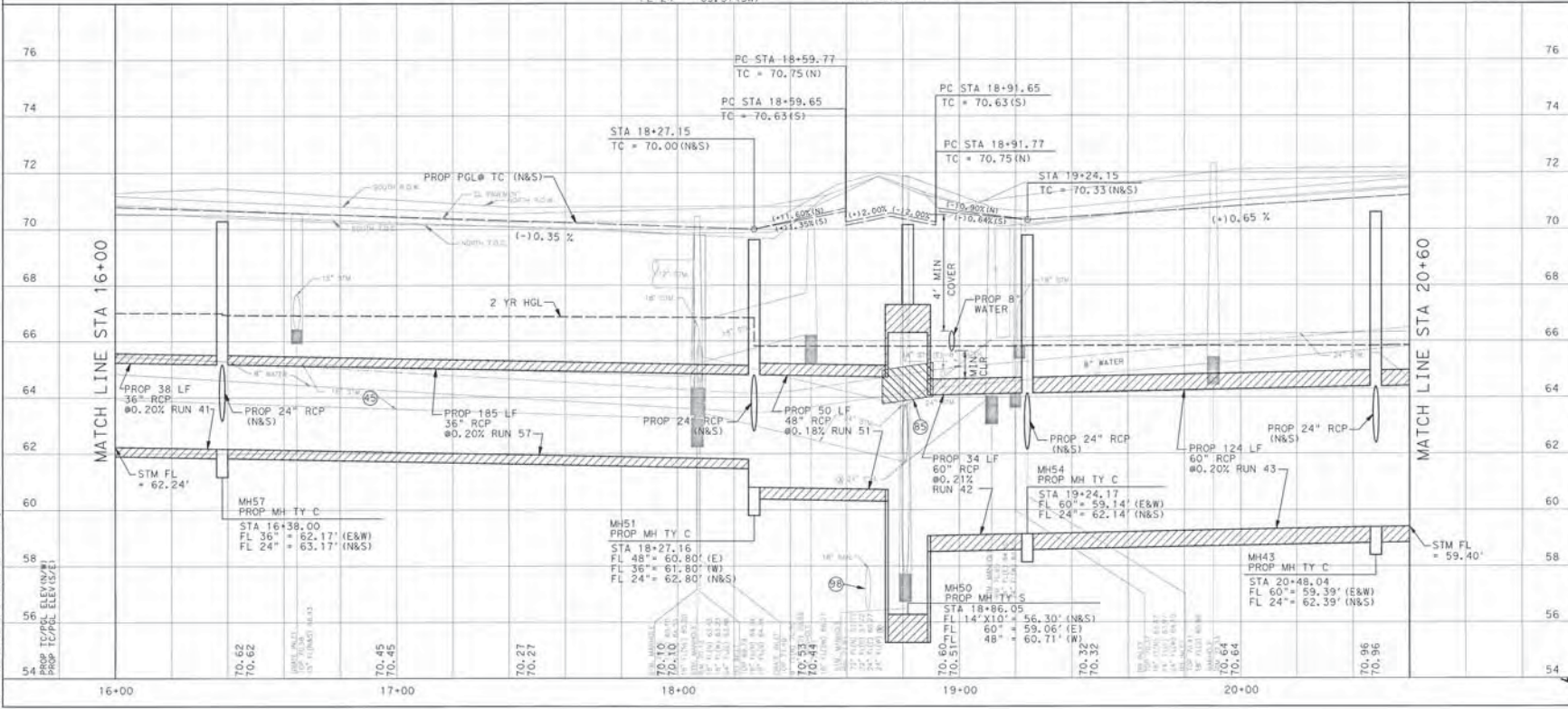


ITEM PNT. NO. 13
 SET COTTON 3/4 IN DIA.
 STA 19+55.18, 11'-27" RT ALBA ST.
 STA 18+92.96, 12'-84" RT FISHER ST.
 ELEV. = 71.30

PROJECT BENCHMARK DATA:
 CITY OF HOUSTON MONUMENT NO. 5260-8208,
 4 TYPE 48 MARK LOCATED ON THE
 NORTHEAST CORNER OF ALBA ROAD AND
 SUE BARNETT DRIVE. ELEVATION = 74.48'
 (NAVODD/CORS 2011 ADJ.)

TO ARRANGE FOR LINES TO BE TURNED OFF OR MOVED, CALL CENTERPOINT AT 713-207-2222.

PRIVATE UTILITY LINES SHOWN
 AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET B.L.O.R. OR EXISTENTS CALL THE ONE-CALL NOTIFICATION 1-800-368-5847.



APPROVED FOR ATAL TEXAS/SMIT UNDERGROUND CONDUIT FACILITIES ONLY
 SIGNATURE VALID FOR ONE YEAR

APPROVED FOR ENERGY/UNDERGROUND ELECTRICITY FACILITIES VERIFICATION ONLY
 THIS SIGNATURE VERIFIES EXISTING UNDERGROUND FACILITIES NOT TO BE USED FOR CONFLICT VERIFICATION. 1 SIGNATURE VALID FOR SIX MONTHS.

DATE: 10/20/15

DATE: 10/20/15

DATE: 1/3/2015



CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

FISHER ST PLAN & PROFILE 16+00 TO 20+60

WBS NUMBER
 M-000285-0001-4

DRAWING SCALE
 HORIZ. 1"=20' VERT. 1"=2'

CITY OF HOUSTON PW
 JEFFREY T. HALL, P.E.

SHEET NO. 97 OF 385

55680

NOTE:
1. RECONSTRUCT PVC CURB DRAINS PER PVC YARD DRAIN
DETAIL (SHEET 370). (AT NO SEPARATE PAY).

NOTES:

- FOR HORIZONTAL ALIGNMENT DATA, SEE GEOMETRIC DATA SUMMARY, (SHEET NO. 5-9).
- CURB INLETS & PAVEMENT CALLOUTS ARE TO FACE OF CURB OR EDGE OF PAVMT UNLESS NOTED OTHERWISE.
- REFER TO CROSS STREET PLAN AND PROFILE SHEETS FOR SIDEWALK DRAINAGE AND PAVING INFORMATION.
- REFER TO DEMOLITION PLAN, (SHEET NO. 173-183) FOR STORM REMOVAL LIMITS IN ACCORDANCE WITH COH STD SPEC SECTION 02221. AND PAVEMENT REMOVAL LIMITS.

LEGEND

- DRIVEWAY NUMBER (SEE DRIVEWAY TABLE SHEET FOR MORE INFORMATION)
- PROF LIMITS OF ASPHALT TRANSITION PAVEMENT

TRM PNT. NO. 34
SET NAIL W/SHINER
STA 22+23.34, 16.51' LT FISHER ST.
ELEV. = 72.08

PROJECT BENCHMARK DATA:
CITY OF HOUSTON MONUMENT NO. 5260-8208,
A TYPE #4 MARK LOCATED ON THE
NORTHEAST CORNER OF ALBA ROAD AND
SUE BARNETT DRIVE. ELEVATION = 74.48'
(NAVD83/CONS. 2011 ADJ. 1)

TO ARRANGE FOR LINES TO BE TURNED OFF OR
MOVED, CALL CENTERPOINT AT 713-207-2222.

PRIVATE UTILITY LINES SHOWN
AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET A.D.R. OR
BASEMENTS CALL THE HOME STAR NOTIFICATION 713-223-4547.

[Signature] DATE: 10-20-15
RECOGNIZED ENGINEERING/NATURAL GAS FACILITIES VERIFICATION ONLY.
THIS SIGNATURE VERIFIES THAT YOU HAVE SHOWN ALL NATURAL
GAS LINES CORRECTLY MET TO BE USED FOR CONFLICT
VERIFICATION. (GAS SERVICE LINES ARE NOT SHOWN.)
SIGNATURE VALID FOR 6 MONTHS.

[Signature] DATE: 10/20/15
APPROVED FOR STATE/TEXAS/INTER UNDERGROUND CONDUIT
FACILITIES ONLY
SIGNATURE VALID FOR ONE YEAR

[Signature] DATE: 10-20-15
CONDUCTED UNDERGROUND ELECTRICAL FACILITIES
VERIFICATION ONLY.
THIS SIGNATURE VERIFIES EXISTING UNDERGROUND FACILITIES-
NOT TO BE USED FOR CONFLICT VERIFICATION. 1
SIGNATURE VALID FOR SIX MONTHS.



CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND
SHEPHERD PARK (CENTRAL)
DRAINAGE AND PAVING

FISHER ST
PLAN & PROFILE
20+60 TO END

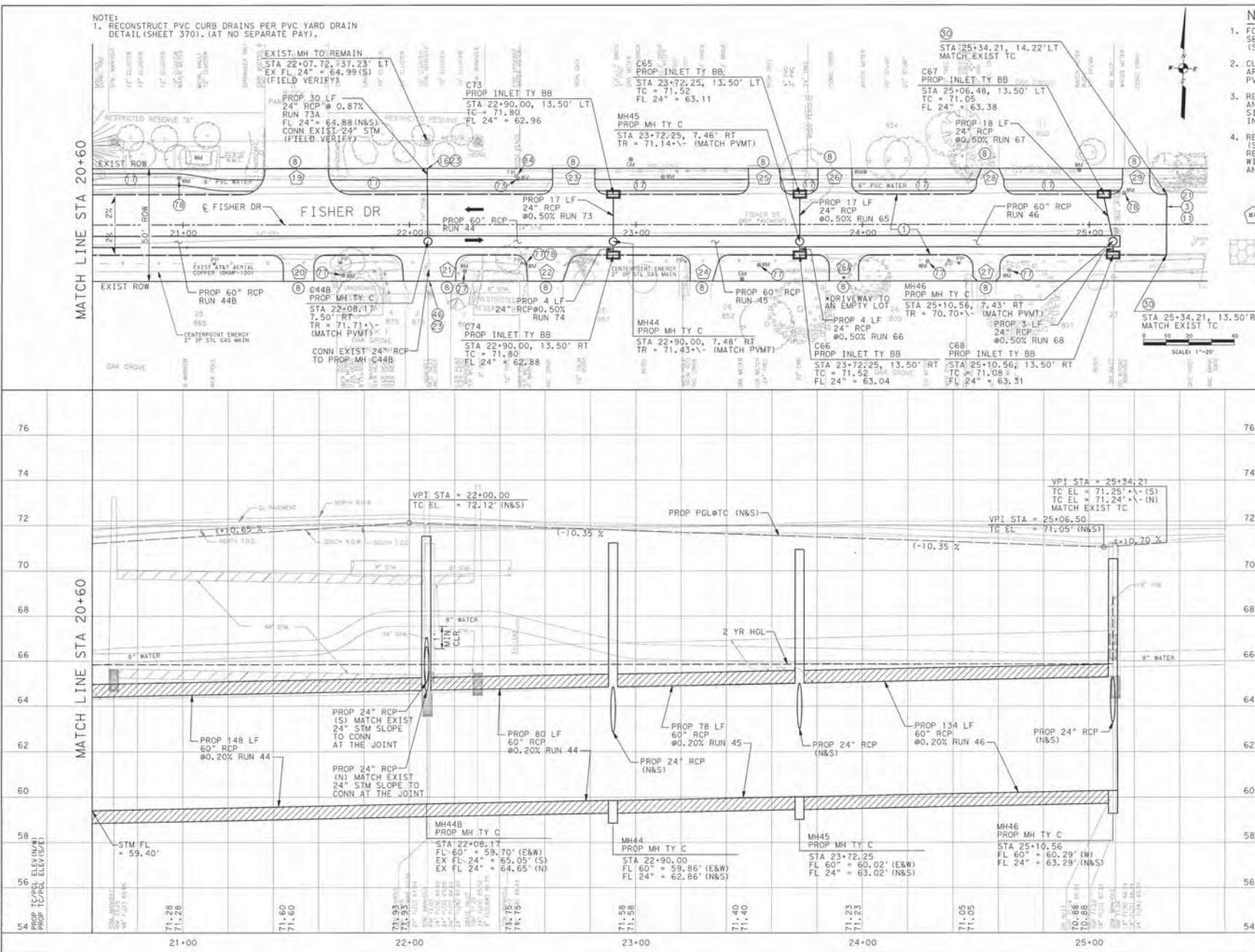
WDS NUMBER
M-000285-0001-4

DRAWING SCALE
HORIZ. 1"=20' VERT. 1"=2'

CITY OF HOUSTON PM
JEFFREY T. HALL, P.E.

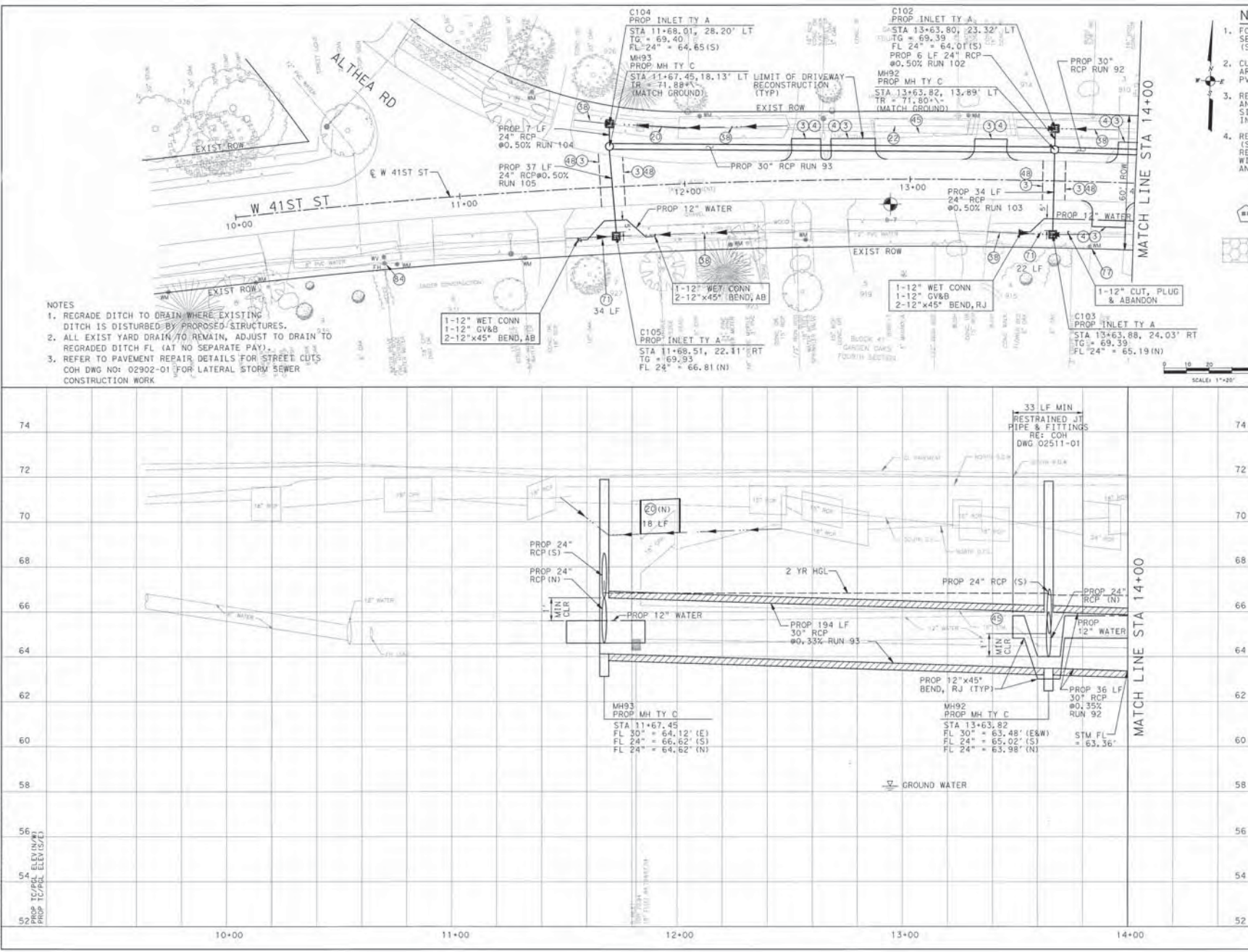
SHEET NO. 98 OF 385

55680



DATE: 04/02/2015 2:32:46 PM
A:\000045\CK0002_DWG\DWG\20M_Plan_Profile.dwg

DATE: 04/02/2015 3:30:49 PM
 R:\020045-02\0500 -DR\DWG\0501_PLOT_P105.dwg



- NOTES
1. REGRADE DITCH TO DRAIN WHERE EXISTING DITCH IS DISTURBED BY PROPOSED STRUCTURES.
 2. ALL EXIST YARD DRAIN TO REMAIN, ADJUST TO DRAIN TO REGRADED DITCH FL (AT NO SEPARATE PAV).
 3. REFER TO PAVEMENT REPAIR DETAILS FOR STREET CUTS COH DWG NO: 02902-01 FOR LATERAL STORM SEWER CONSTRUCTION WORK

- NOTES:
1. FOR HORIZONTAL ALIGNMENT DATA, SEE GEOMETRIC DATA SUMMARY. (SHEET NO. 5-9).
 2. CURB INLETS & PAVEMENT CALLOUTS ARE TO FACE OF CURB OR EDGE OF PAVT UNLESS NOTED OTHERWISE.
 3. REFER TO CROSS STREET PLAN AND PROFILE SHEETS FOR SIDEWALK DRAINAGE AND PAVING INFORMATION.
 4. REFER TO DEMOLITION PLAN, (SHEET NO. 173-183) FOR STORM REMOVAL LIMITS IN ACCORDANCE WITH COH STD SPEC SECTION 02221. AND PAVEMENT REMOVAL LIMITS.

- LEGEND
- DRIVEWAY NUMBER (SEE DRIVEWAY TABLE SHEET FOR MORE INFORMATION)
 - PROP LIMITS OF ASPHALT TRANSITION PAVEMENT

TRM PNT. NO. 41
 SET 3/8" IR W/CAP
 STA 10+62.51, 19.68' LT W. 41ST ST.
 ELEV. = 72.10

PROJECT BENCHMARK DATA:
 CITY OF HOUSTON MONUMENT NO. 5260-8208,
 A TYPE 44 MARK LOCATED ON THE
 NORTHEAST CORNER OF ALBA ROAD AND
 SUE BARNETT DRIVE. ELEVATION = 74.48'
 (NAVD83/COORD. 2011 ADJ.)

TO ARRANGE FOR LINES TO BE TURNED OFF OR MOVED, CALL CENTERPOINT AT 713-207-2222.

PRIVATE UTILITY LINES SHOWN
 AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.W. OR ASSESSMENTS CALL THE LONE STAR NOTIFICATION 713-223-4547.

[Signature] DATE: 10-20-15
 APPROVED FOR AT&T TEXAS/WEST UNDERGROUND CONDUIT FACILITIES ONLY
 THIS SIGNATURE VERIFIED THAT YOU HAVE SHOWN ALL NATURAL GAS LINES CORRECTLY. NOT TO BE USED FOR CONFLICT VERIFICATION. I (AS SERVICE LINES ARE NOT SHOWN.) SIGNATURE VALID FOR 36 MONTHS.

[Signature] DATE: 10-20-15
 APPROVED FOR AT&T TEXAS/WEST UNDERGROUND CONDUIT FACILITIES ONLY
 THIS SIGNATURE VERIFIED THAT YOU HAVE SHOWN ALL NATURAL GAS LINES CORRECTLY. NOT TO BE USED FOR CONFLICT VERIFICATION. I (AS SERVICE LINES ARE NOT SHOWN.) SIGNATURE VALID FOR 36 MONTHS.

SDPS
 Houston Storm Drainage Program Support

PGAL
 3005 W. 17th St.
 Houston, Texas 77042
 Phone: (713) 622-1444
 Fax: (713) 968-9333

SUPPLIED BY: LANTECH
 P.O. BOX 4576
 HOUSTON, TX 77240

CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

W 41ST ST
 PLAN & PROFILE
 BEGIN TO STA 14+00

WBS NUMBER
 M-000285-0001-4

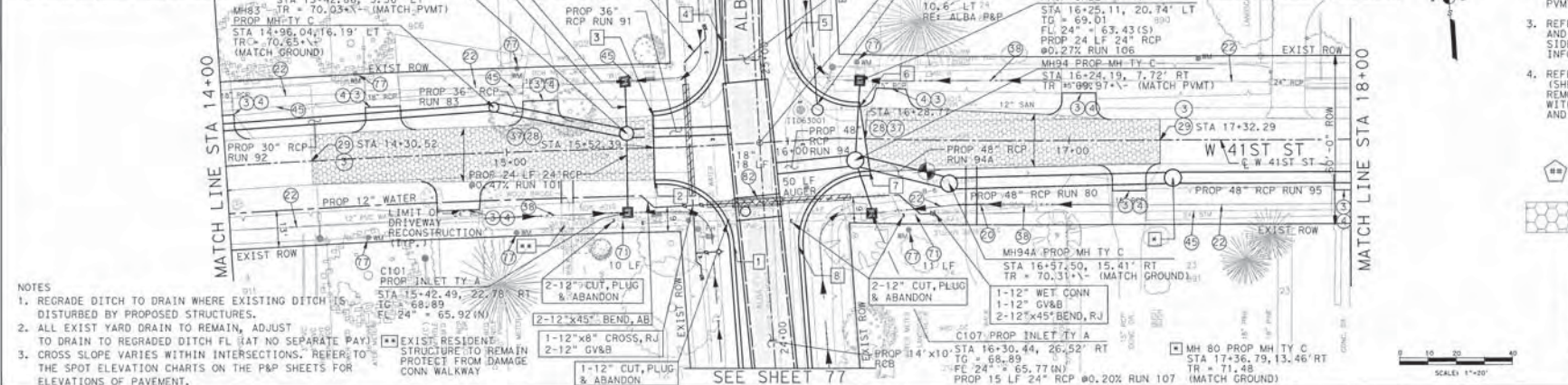
DRAWING SCALE
 HORIZ. 1"=20' VERT. 1"=2'

CITY OF HOUSTON PW
 JEFFREY T. HALL, P.E.
 SHEET NO. 99 OF 385

55630

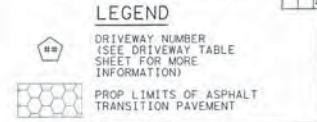
SPOT ELEVATION CHART			
NO.	STREET NAME	STATION	OFFSET EOP
1	W41ST ST	15+78.80	36.98' RT 70.58
2	W41ST ST	15+52.39	11.50' LT 69.84
3	W41ST ST	15+52.39	11.50' LT 69.84
4	W41ST ST	15+78.57	36.63' LT 70.67

SPOT ELEVATION CHART			
NO.	STREET NAME	STATION	OFFSET EOP
5	W41ST ST	16+01.56	36.00' LT 70.58
6	W41ST ST	16+25.43	11.50' LT 69.89
7	W41ST ST	16+29.50	11.50' RT 69.84
8	W41ST ST	16+01.82	37.70' RT 70.55



- NOTES
1. REGRADE DITCH TO DRAIN WHERE EXISTING DITCH IS DISTURBED BY PROPOSED STRUCTURES.
 2. ALL EXIST YARD DRAIN TO REMAIN, ADJUST TO DRAIN TO REGRADED DITCH FL (AT NO SEPARATE PAY) TO DRAIN TO REGRADED DITCH FL (AT NO SEPARATE PAY).
 3. CROSS SLOPE VARIES WITHIN INTERSECTIONS. REFER TO THE SPOT ELEVATION CHARTS ON THE P&P SHEETS FOR ELEVATIONS OF PAVEMENT.

- NOTES:
1. FOR HORIZONTAL ALIGNMENT DATA, SEE GEOMETRIC DATA SUMMARY. (SHEET NO. 5-9).
 2. CURB INLETS & PAVEMENT CALLOUTS ARE TO FACE OF CURB OR EDGE OF PAVT UNLESS NOTED OTHERWISE.
 3. REFER TO CROSS STREET PLAN AND PROFILE SHEETS FOR SIDEWALK DRAINAGE AND PAVING INFORMATION.
 4. REFER TO DEMOLITION PLAN, (SHEET NO. 173-183) FOR STORM REMOVAL LIMITS IN ACCORDANCE WITH COM STD SPEC SECTION 02221, AND PAVEMENT REMOVAL LIMITS.



IRBM: PWT, NO. 14
 END 3/8" TR W/CAP
 STA 24+82.60, 18.91' LT ALBA ST.
 STA 15+71.09, 12.07' LT W. 41ST ST.
 ELEV. = 71.69

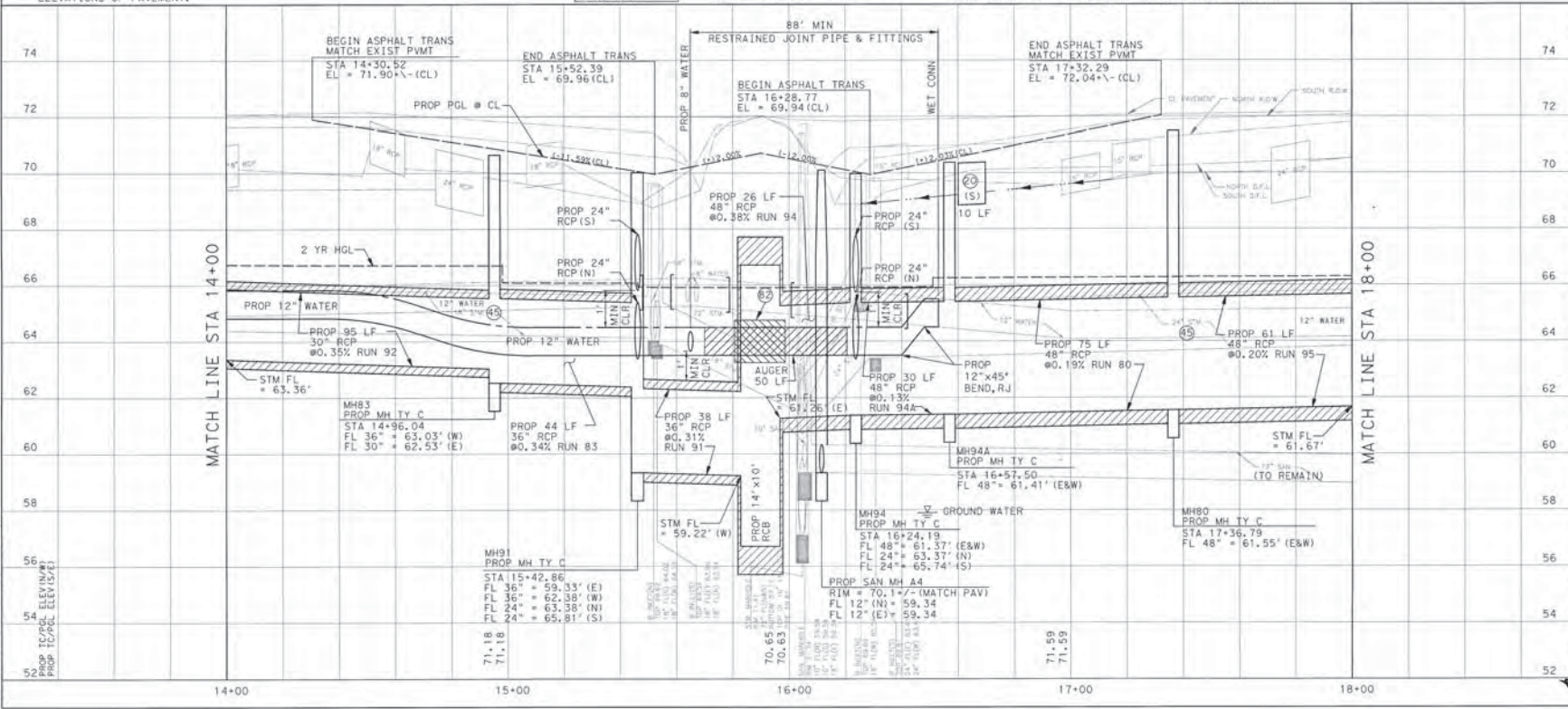
PROJECT BENCHMARK DATA:
 CITY OF HOUSTON MONUMENT NO. 5260-8208,
 A TYPE 44 MARK LOCATED ON THE
 NORTHEAST CORNER OF ALBA ROAD AND
 SUE BARNETT DRIVE. ELEVATION = 74.48'
 (NAVD83 CORRS 2011 ADJ.)

TO ARRANGE FOR LINES TO BE TURNED OFF OR MOVED, CALL CENTERPOINT AT 713-207-2222.

PRIVATE UTILITY LINES SHOWN
 AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.W. OR EASEMENTS CALL THE ONE STOP NOTIFICATION 713-223-2647.

APPROVED FOR AT&T TEXAS/ONY UNDERGROUND FACILITIES ONLY.
 THIS SIGNATURE VERIFIES THAT YOU HAVE SHOWN ON NATURAL GAS LINES CORRECTLY AND TO BE USED FOR COMPLEX VERIFICATION. GAS SERVICE LINES ARE NOT SHOWN. SIGNATURE VALID FOR 30 MONTHS.

APPROVED FOR AT&T TEXAS/ONY UNDERGROUND FACILITIES ONLY.
 THIS SIGNATURE VERIFIES THAT YOU HAVE SHOWN ON NATURAL GAS LINES CORRECTLY AND TO BE USED FOR COMPLEX VERIFICATION. GAS SERVICE LINES ARE NOT SHOWN. SIGNATURE VALID FOR 30 MONTHS.



DATE: 9/20/2016
 7003.50 AM
 A:\PROJECTS\5400\54000000_000\DWG\DWG_MHST_P&P.dwg

DATE: 10-1-15
 DATE: 10-1-15

SDPS
 Houston Storm Drainage Program Support

PGAL
 3131 BRINDLEWOOD, SUITE 200
 HOUSTON, TEXAS 77042
 PHONE (713) 652-1444
 FAX (713) 968-9333

SUPPLIED BY: LANDTECH
 178 N. GULF
 HOUSTON, TX 77056

CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

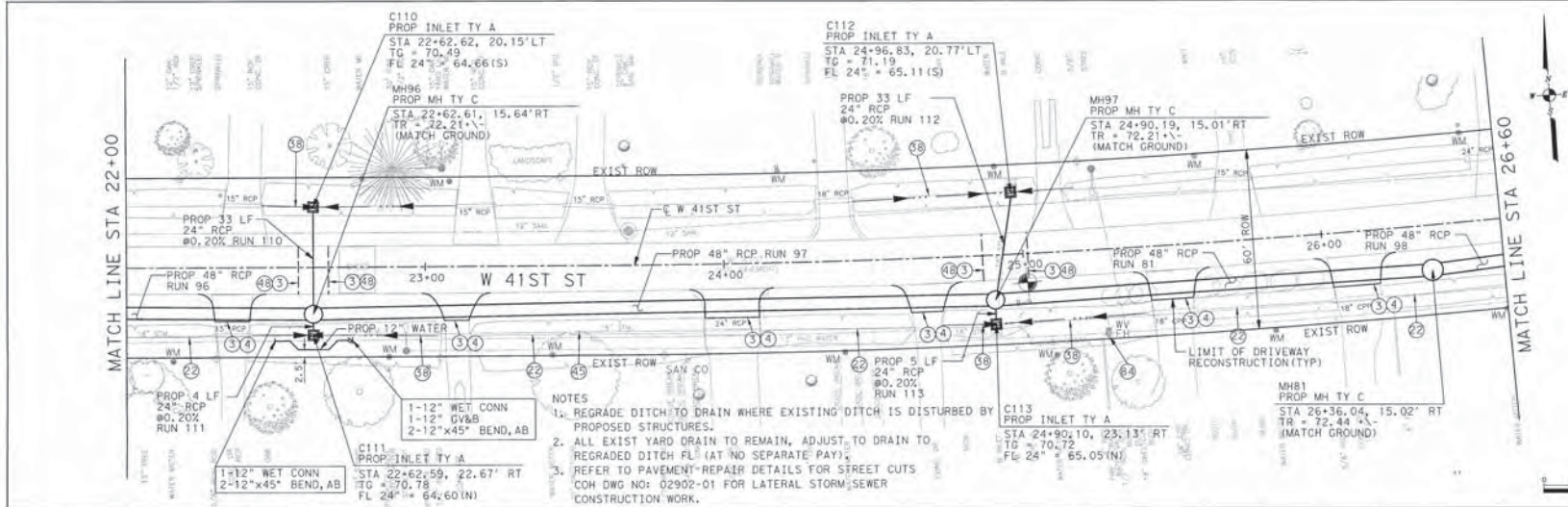
W 41ST ST
 PLAN & PROFILE
 STA 14+00 TO STA 18+00

WBS NUMBER
 M-000285-0001-4

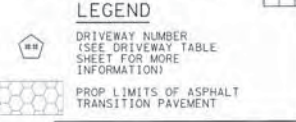
DRAWING SCALE
 HORIZ. 1"=20' VERT. 1"=2'

CITY OF HOUSTON PW
 JEFFREY T. HALL, P.E.
 SHEET NO. 100 OF 385

55630



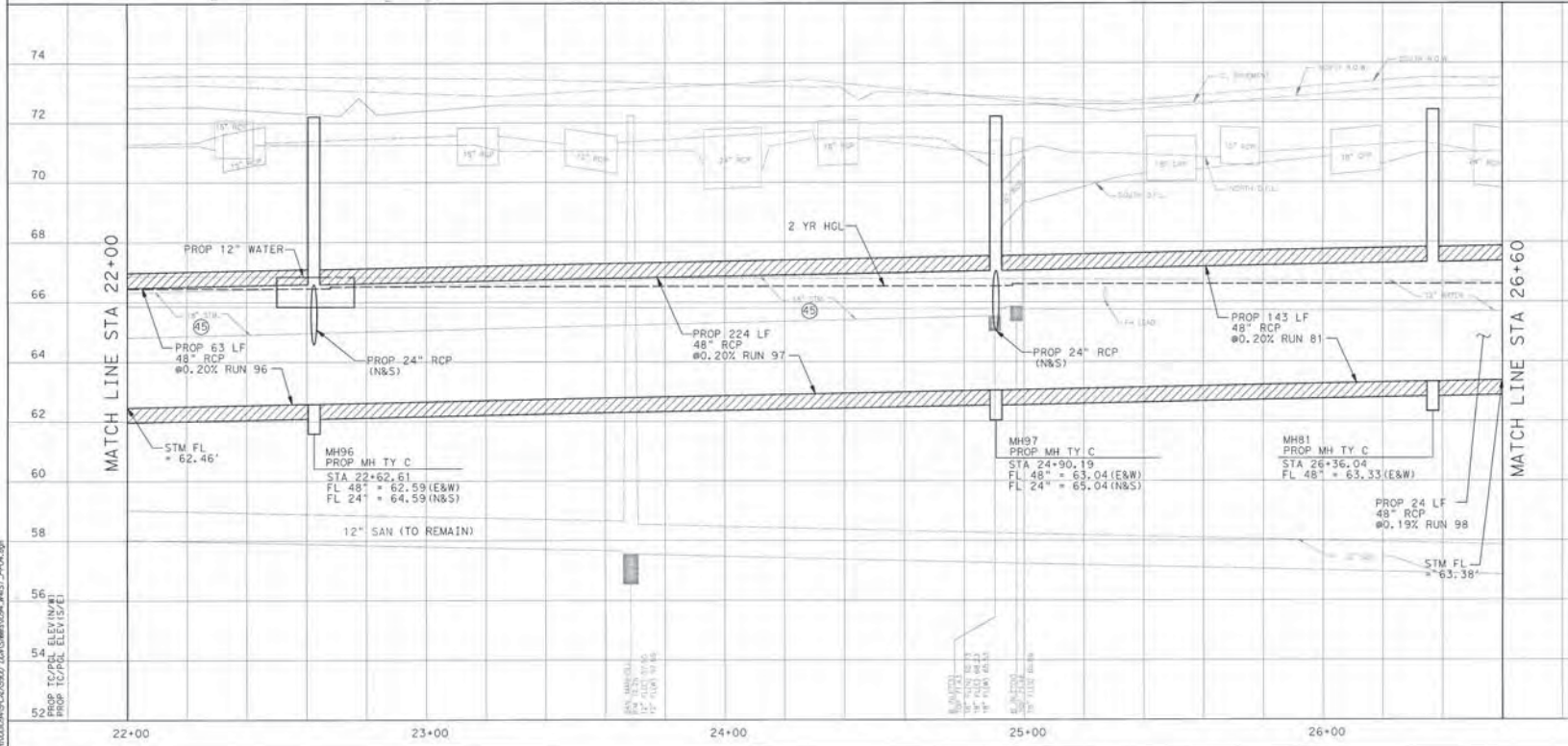
- NOTES:**
- FOR HORIZONTAL ALIGNMENT DATA, SEE GEOMETRIC DATA SUMMARY, (SHEET NO. 5-9).
 - CURB INLETS & PAVEMENT CALLOUTS ARE TO FACE OF CURB OR EDGE OF PAVT UNLESS NOTED OTHERWISE.
 - REFER TO CROSS STREET PLAN AND PROFILE SHEETS FOR SIDESTREET DRAINAGE AND PAVING INFORMATION.
 - REFER TO DEMOLITION PLAN, (SHEET NO. 173-183) FOR STORM REMOVAL LIMITS IN ACCORDANCE WITH COH STD SPEC SECTION 02221, AND PAVEMENT REMOVAL LIMITS.



TEMP. PNT. NO. 39
 SET 3/8" IR W/CAP
 STA 20+39.65, 12.04' RT W. 41ST ST.
 ELEV. = 72.64

PROJECT BENCHMARK DATA:
 CITY OF HOUSTON MONUMENT NO. 5260-8208,
 A TYPE AA MARK LOCATED ON THE
 NORTHEAST CORNER OF ALBA ROAD AND
 SUE BARNETT DRIVE. ELEVATION = 74.48'
 (NAD83/CORS 2011 ADJ.)

- NOTES**
- REGRADE DITCH TO DRAIN WHERE EXISTING DITCH IS DISTURBED BY PROPOSED STRUCTURES.
 - ALL EXIST YARD DRAIN TO REMAIN. ADJUST TO DRAIN TO REGRADED DITCH FL (AT NO SEPARATE PAY).
 - REFER TO PAVEMENT REPAIR DETAILS FOR STREET CUTS COH DWG NO: 02902-01 FOR LATERAL STORM-SEWER CONSTRUCTION WORK.



APPROVED FOR AT-LAST TRANSIT UNDERGROUND CONDUIT FACILITIES ONLY
 SIGNATURE VALID FOR ONE YEAR

APPROVED FOR EXISTING UNDERGROUND FACILITIES VERIFICATION ONLY
 THIS SIGNATURE VERIFIES EXISTING UNDERGROUND FACILITIES NOT TO BE USED FOR CONFLICT VERIFICATION. SIGNATURE VALID FOR SIX MONTHS.



CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

W 41ST ST
 PLAN & PROFILE
 STA 22+00 TO STA 26+60

WBS NUMBER	M-000285-0001-4
DRAWING SCALE	HORIZ. 1"=20' VERT. 1"=2'
CITY OF HOUSTON PW	JEFFREY T. HALL, P.E.
SHEET NO. 102 OF 385	

DATE: 10/20/15 3:30P PM 10/20/15 3:30P PM 10/20/15 3:30P PM

MATCH LINE STA 26+60

MATCH LINE STA 26+60

- NOTES
1. REGRADE DITCH TO DRAIN WHERE EXISTING DITCH IS DISTURBED BY PROPOSED STRUCTURES.
 2. ALL EXIST YARD DRAIN TO REMAIN, ADJUST TO DRAIN TO REGRADED DITCH FL (AT NO SEPARATE PAY).
 3. REFER TO PAVEMENT REPAIR DETAILS FOR STREET CUTS COH DWG NO. 02902-01 FOR LATERAL STORM SEWER CONSTRUCTION WORK

C116
PROP INLET TY A
STA 30+87.10, 22.47' LT
TG = 70.35
FL 24" = 66.27(S)

PROP 31 LF
24" RCP
#0.20% RUN 116

MH99
PROP MH TY C
STA 30+87.88, 12.81' RT
TR = 73.06'
(MATCH GROUND)

C114
PROP INLET TY A
STA 27+87.97, 21.16' LT
TG = 70.24
FL 24" = 65.68(S)

PROP 28 LF
24" RCP
#0.20% RUN 114

MH98
PROP MH TY C
STA 27+86.39, 12.37' RT
TR = 72.77'
(MATCH GROUND)

C115
PROP INLET TY A
STA 27+86.35, 21.91' RT
TG = 70.55
FL 24" = 65.63(N)

1-12" WET CONN
2-12"x45" BEND, AB

MH82
PROP MH TY C
STA 29+37.91, 14.98' RT
TR = 72.55'
(MATCH GROUND)

C117
PROP INLET TY A
STA 30+88.34, 20.87' RT
TG = 70.33
FL 24" = 66.22(N)

1-12" WET CONN
2-12"x45" BEND, AB

1-12" WET CONN
1-12" GV&B
2-12"x45" BEND, AB

- NOTES:
1. FOR HORIZONTAL ALIGNMENT DATA, SEE GEOMETRIC DATA SUMMARY. (SHEET NO. 5-9).
 2. CURB INLETS & PAVEMENT CALLOUTS ARE TO PART OF CURB OR EDGE OF PMT UNLESS NOTED OTHERWISE.
 3. REFER TO CROSS STREET PLAN AND PROFILE SHEETS FOR SIDESTREET DRAINAGE AND PAVING INFORMATION.
 4. REFER TO DEMOLITION PLAN, (SHEET NO. 173-183) FOR STORM REMOVAL LIMITS IN ACCORDANCE WITH COH STD SPEC SECTION 02221. AND PAVEMENT REMOVAL LIMITS.

LEGEND

- DRIVEWAY NUMBER (SEE DRIVEWAY TABLE SHEET FOR MORE INFORMATION)
- PROP LIMITS OF ASPHALT TRANSITION PAVEMENT

TBM: PNT. NO. 40
SET 3/8" R W/CAP
STA 32+32.71, 13.95' LT
ELEV. = 72.74

PROJECT BENCHMARK DATA:
CITY OF HOUSTON MONUMENT NO. 5260-8208, A TYPE 6A MARK LOCATED ON THE NORTHEAST CORNER OF ALBA ROAD AND SUE BARNETT DRIVE. ELEVATION = 74.48' (NAVDS/COHS 2011 ADJ.).

TO ARRANGE FOR LINES TO BE TURNED OFF OR MOVED, CALL CENTERPOINT AT 713-297-2222.

PRIVATE UTILITY LINES SHOWN AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.W. OR easements CALL THE ONE-CALL NOTIFICATION 1-877-874-6842.

DATE: 10-20-15
SIGNATURE: [Signature]

APPROVED FOR AT&T TEXAS/NET UNDERGROUND CONDUIT FACILITIES ONLY
SIGNATURE: [Signature] DATE: 10-20-15

APPROVED FOR UNDERGROUND ELECTRICAL FACILITIES VERIFICATION ONLY.
THIS SIGNATURE VERIFIES EXISTING UNDERGROUND FACILITIES NOT TO BE USED FOR CONFLICT VERIFICATION. SIGNATURE: [Signature] DATE: 10-20-15



CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

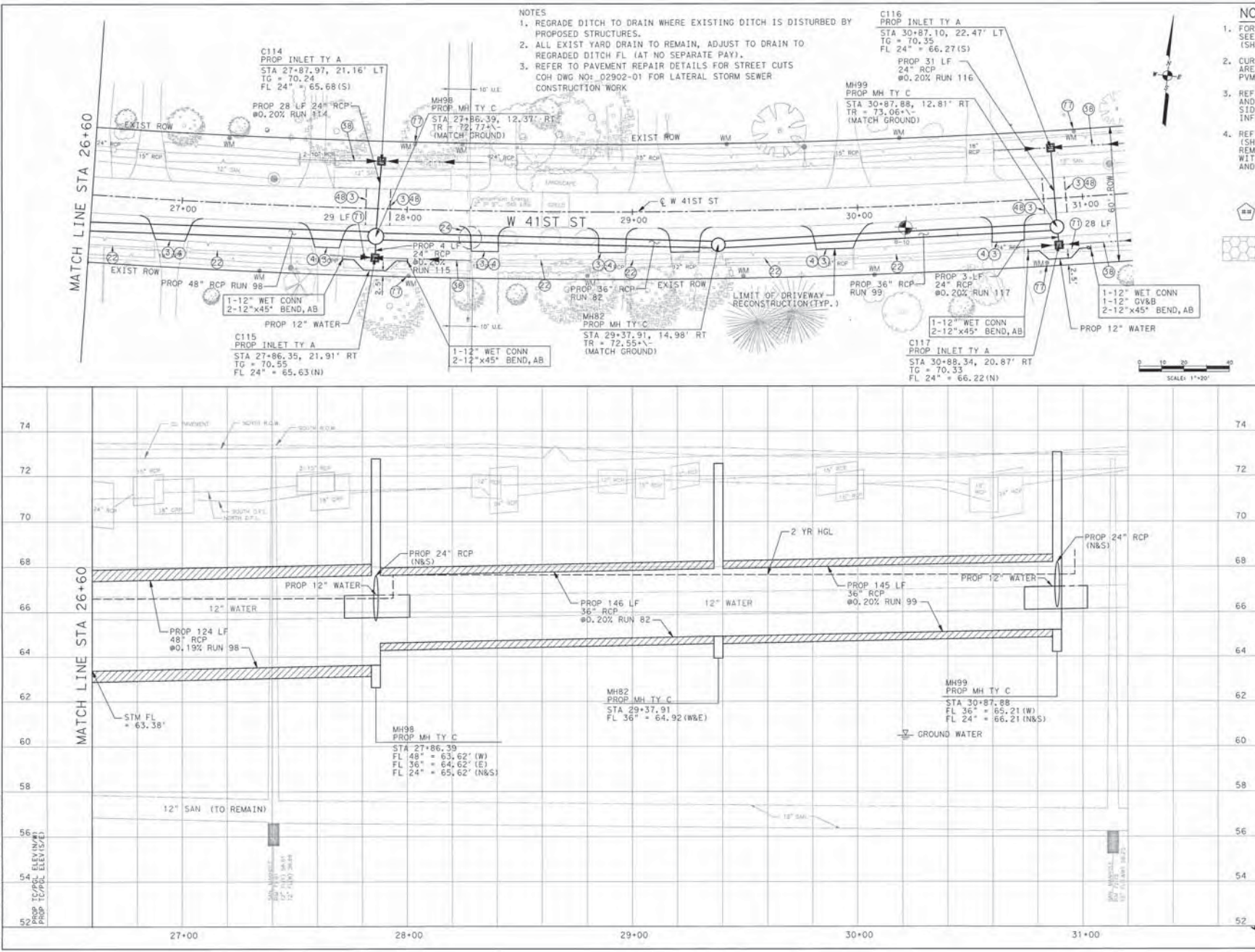
GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

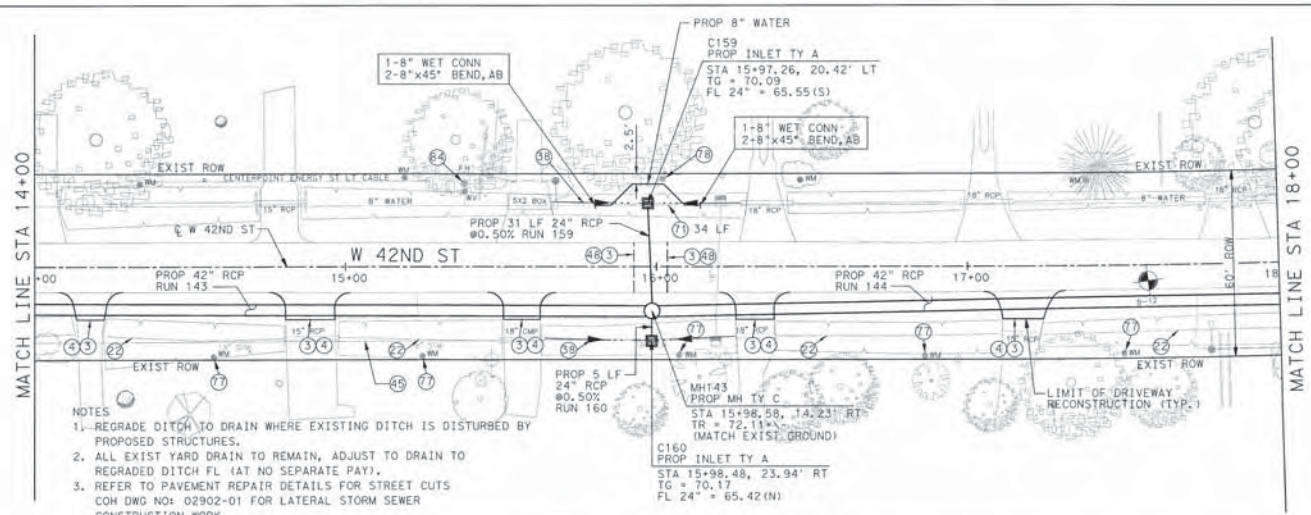
W 41ST ST
PLAN & PROFILE
STA 26+60 TO END

NBS NUMBER
M-000285-0001-4
DRAWING SCALE
HORIZ. 1"=20' VERT. 1"=2'
CITY OF HOUSTON PM
JEFFREY T. HALL, P.E.
SHEET NO. 103 OF 385



DATE: 04/20/15 04:00 PM 04/20/15 04:00 PM 04/20/15 04:00 PM 04/20/15 04:00 PM





- NOTES**
1. REGRADE DITCH TO DRAIN WHERE EXISTING DITCH IS DISTURBED BY PROPOSED STRUCTURES.
 2. ALL EXIST YARD FLAIN TO REMAIN, ADJUST TO DRAIN TO REGRADED DITCH FL (AT NO SEPARATE PAY).
 3. REFER TO PAVEMENT REPAIR DETAILS FOR STREET CUTS
- COH DWG NO: 02902-01 FOR LATERAL STORM SEWER CONSTRUCTION WORK

C160
 PROP INLET TY A
 STA 15+98.48, 23.94' RT
 TG = 70.17
 FL 24" = 65.42 (N)



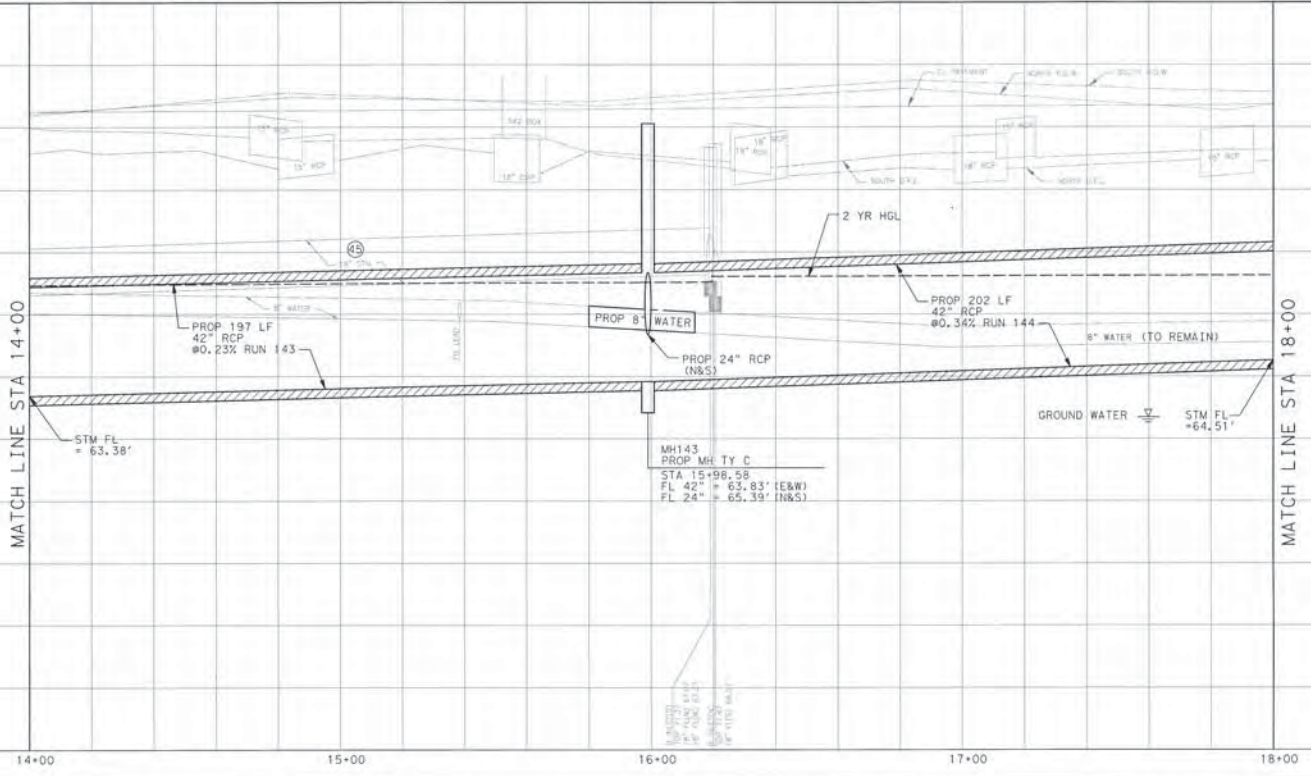
- NOTES:**
1. FOR HORIZONTAL ALIGNMENT DATA, SEE GEOMETRIC DATA SUMMARY. (SHEET NO. 5-9).
 2. CURB INLETS & PAVEMENT CALLOUTS ARE TO FACE OF CURB OR EDGE OF PAVT LINES UNLESS NOTED OTHERWISE.
 3. REFER TO CROSS STREET PLAN AND PROFILE SHEETS FOR SIDESTREET DRAINAGE AND PAVING INFORMATION.
 4. REFER TO DEMOLITION PLAN, (SHEET NO. 173-183) FOR STORM REMOVAL LIMITS IN ACCORDANCE WITH COH STD SPEC SECTION 02221. AND PAVEMENT REMOVAL LIMITS.

- LEGEND**
- DRIVEWAY NUMBER (SEE DRIVEWAY TABLE SHEET FOR MORE INFORMATION)
 - PROP LIMITS OF ASPHALT TRANSITION PAVEMENT

TRM: PNT. NO. 42
 SET 3/8" IR W/CAP
 STA 16+77.86, 11.54' RT W. 42ND ST.
 ELEV. = 72.39

PROJECT BENCHMARK DATA:
 CITY OF HOUSTON MONUMENT NO. 5260-8208,
 A TYPE 4A MARK LOCATED ON THE
 NORTHEAST CORNER OF ALBA ROAD AND
 SUE BARNETT DRIVE. ELEVATION = 74.48
 (NAYDBB/CORS 2011 ADJ.)

TO ARRANGE FOR LINES TO BE TURNED OFF OR
 MOVED, CALL CENTERPOINT AT 713-207-2222.



MH143
 PROP MH TY C
 STA 15+98.58
 FL 42" = 63.83' (E&W)
 FL 24" = 65.39' (N&S)

PRIVATE UTILITY LINES SHOWN
 AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET P.O.W. OR
 EXHIBITS CALL THE ONE STAR NOTIFICATION 713-223-4547.

2/22/15 DATE: 10/20/15
 SIGNATURE VALID FOR SIX MONTHS.

2/22/15 DATE: 10/20/15
 SIGNATURE VALID FOR ONE YEAR

2/22/15 DATE: 10/20/15
 SIGNATURE VALID FOR SIX MONTHS.



CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND
 SHEPHERD PARK (CENTRAL)
 DRAINAGE AND PAVING

W 42ND ST
 PLAN & PROFILE
 STA 14+00 TO STA 18+00

WBS NUMBER
 M-000285-0001-4

DRAWING SCALE
 HORIZ. 1"=20' VERT. 1"=2'

CITY OF HOUSTON PM
 JEFFREY T. HALL, P.E.

SHEET NO. 105 OF 385

55630

DATE: 10/16/2015 2:30:05 PM T:\02\02902\5-00\5000-DRAIN\DWG\02902-01\W42ND_PFD2.dwg

- NOTES**
1. REGRADE DITCH TO DRAIN WHERE EXISTING DITCH IS DISTURBED BY PROPOSED STRUCTURES.
 2. ALL EXIST YARD DRAIN TO REMAIN, ADJUST TO DRAIN TO REGRADED DITCH-FL (AT NO SEPARATE PAY).
 3. REFER TO PAVEMENT REPAIR DETAILS FOR STREET CUTS COH DWG NO: 02902-01 FOR LATERAL STORM SEWER CONSTRUCTION WORK

- NOTES:**
1. FOR HORIZONTAL ALIGNMENT DATA, SEE GEOMETRIC DATA SUMMARY, (SHEET NO. 5-9).
 2. CURB INLETS & PAVEMENT CALLOUTS ARE TO FACE OF CURB OR EDGE OF PAVMT UNLESS NOTED OTHERWISE.
 3. REFER TO CROSS STREET PLAN AND PROFILE SHEETS FOR SIDESTREET DRAINAGE AND PAVING INFORMATION.
 4. REFER TO DEMOLITION PLAN, (SHEET NO. 173-183) FOR STORM REMOVAL LIMITS IN ACCORDANCE WITH COH STD SPEC SECTION 02221, AND PAVEMENT REMOVAL LIMITS.

LEGEND

DRIVEWAY NUMBER (SEE DRIVEWAY TABLE SHEET FOR MORE INFORMATION)

PROF LIMITS OF ASPHALT TRANSITION PAVEMENT

BM PNT. NO. 43
 SET 3/8" IR W/CAP
 STA 22+98.24, 11.30' RT W. 42ND ST.
 ELEV. = 73.44

PROJECT BENCHMARK DATA:
 CITY OF HOUSTON MONUMENT NO. 5260-B208,
 A TYPE AA MARK LOCATED ON THE
 NORTHEAST CORNER OF ALBA ROAD AND
 SUE BARNETT DRIVE. ELEVATION = 74.48'
 (NAVD83/COORDS 2011 ADJ.)

TO ARRANGE FOR LINES TO BE TURNED OFF OR MOVED, CALL CENTERPOINT AT 713-207-2222.

PRIVATE UTILITY LINES SHOWN
 AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.W. OR EASEMENTS CALL THE LOCAL NOTIFICATION 713-223-8547.

[Signature] DATE: 10-20-15
 (THIS SIGNATURE VERIFIES THAT YOU HAVE SHOWN CMP NATURAL GAS LINES CORRECTLY AND TO BE USED FOR CONFLICT VERIFICATION.) (GAS SERVICE LINES ARE NOT SHOWN.) SIGNATURE VALID FOR 365 MONTHS.

[Signature] DATE: 10-20-15
 APPROVED FOR KEAT TEXAS/SHET UNDERGROUND CONDUIT FACILITIES ONLY. SIGNATURE VALID FOR ONE YEAR.

[Signature] DATE: 10-20-15
 (THIS SIGNATURE VERIFIES EXISTING UNDERGROUND FACILITIES NOT TO BE USED FOR CONFLICT VERIFICATION.) SIGNATURE VALID FOR 365 MONTHS.



CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

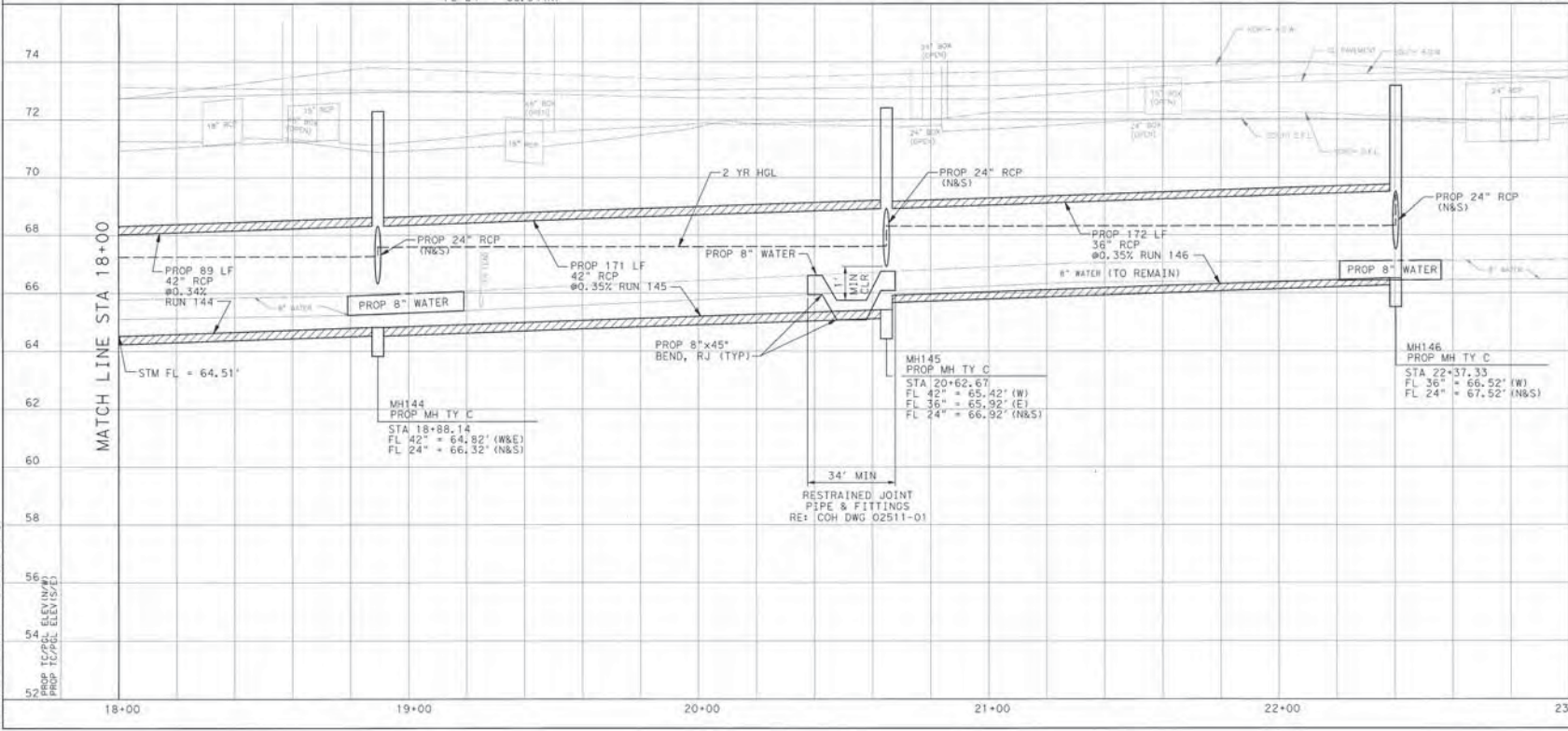
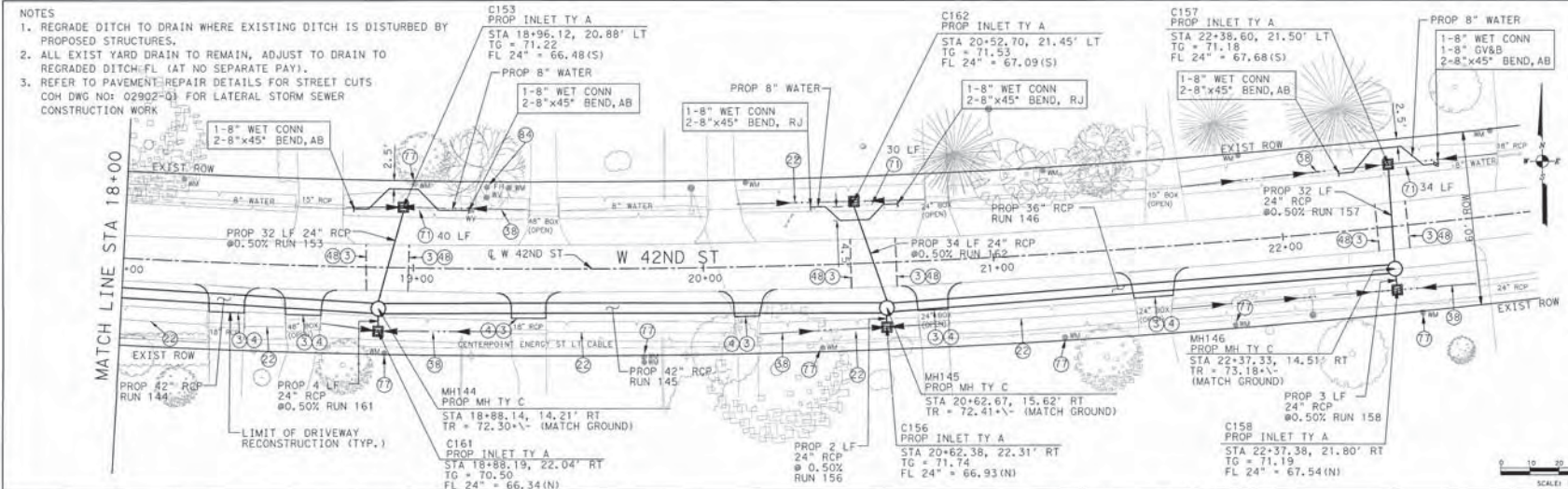
GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

W 42ND ST
 PLAN & PROFILE
 STA 18+00 TO END

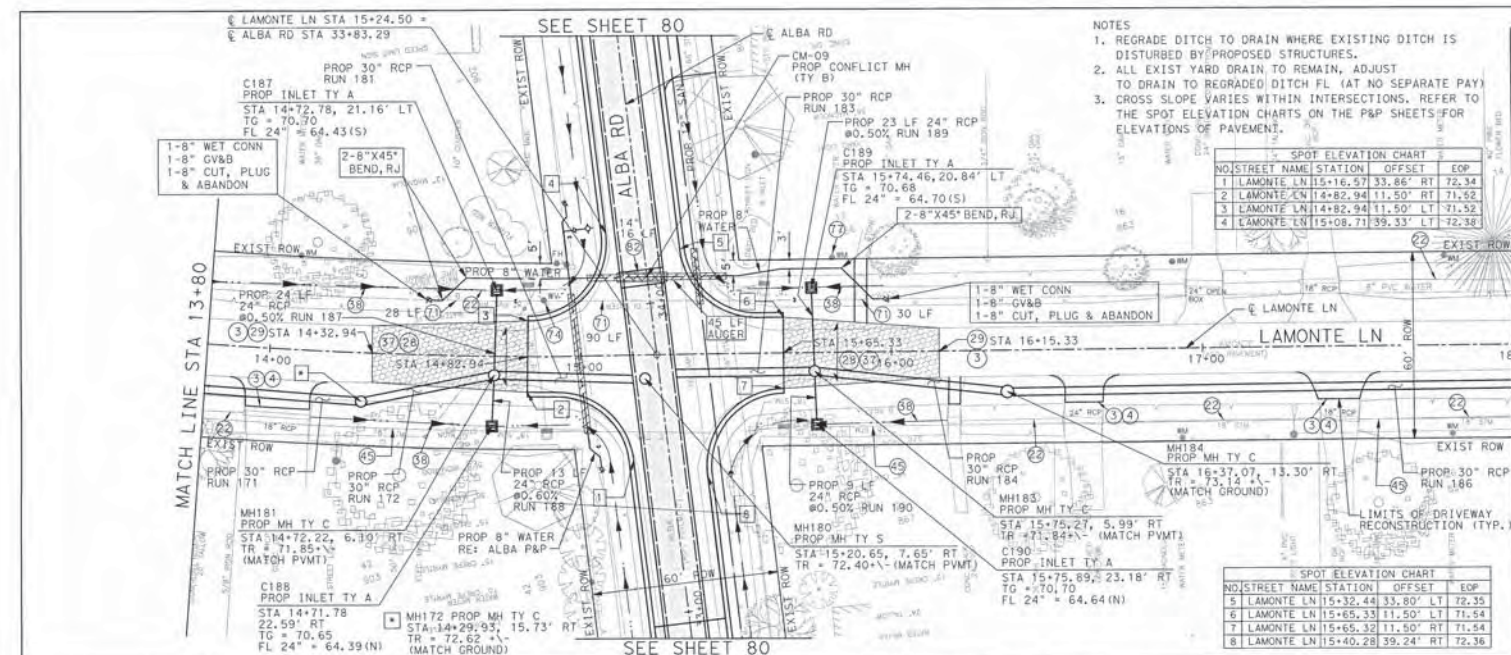
WDS NUMBER
 M-000285-0001-4

DRAWING SCALE
 HORIZ. 1"=20' VERT. 1"=2'

CITY OF HOUSTON PW
 JEFFREY T. HALL, P.E.
 SHEET NO. 106 OF 385



DATE: 04/06/2015
 DRAWN BY: JKH
 CHECKED BY: JKH
 PROJECT: W 42ND ST
 SHEET: 106 OF 385



NOTES:

1. REGRADE DITCH TO DRAIN WHERE EXISTING DITCH IS DISTURBED BY PROPOSED STRUCTURES.
2. ALL EXIST YARD DRAIN TO REMAIN, ADJUST TO DRAIN TO REGRADED DITCH FL (AT NO SEPARATE PAY)
3. CROSS SLOPE VARIES WITHIN INTERSECTIONS. REFER TO THE SPOT ELEVATION CHARTS ON THE P&P SHEETS FOR ELEVATIONS OF PAVEMENT.

SPOT ELEVATION CHART

NO.	STREET NAME	STATION	OFFSET	EOP
1	LAMONTE LN	15+16.57	33.86'	RT 72.34
2	LAMONTE LN	14+82.94	11.50'	RT 71.52
3	LAMONTE LN	14+82.94	11.50'	LT 71.52
4	LAMONTE LN	15+08.71	39.33'	LT 72.38

SPOT ELEVATION CHART

NO.	STREET NAME	STATION	OFFSET	EOP
5	LAMONTE LN	15+32.44	33.80'	LT 72.35
6	LAMONTE LN	15+65.33	11.50'	LT 71.54
7	LAMONTE LN	15+65.32	11.50'	RT 71.54
8	LAMONTE LN	15+40.28	39.24'	RT 72.36

LEGEND

- DRIVEWAY NUMBER (SEE DRIVEWAY TABLE SHEET FOR MORE INFORMATION)
- PROP LIMITS OF ASPHALT TRANSITION PAVEMENT

NOTES:

1. FOR HORIZONTAL ALIGNMENT DATA, SEE GEOMETRIC DATA SUMMARY, (SHEET NO. 5-9).
2. CURB INLETS & PAVEMENT CALLOUTS ARE TO FACE OF CURB OR EDGE OF PMT UNLESS NOTED OTHERWISE.
3. REFER TO CROSS STREET PLAN AND PROFILE SHEETS FOR SIDE STREET DRAINAGE AND PAVING INFORMATION.
4. REFER TO DEMOLITION PLAN, (SHEET NO. 173-183) FOR STORM REMOVAL LIMITS IN ACCORDANCE WITH COM STD SPEC SECTION 02221, AND PAVEMENT REMOVAL LIMITS.

LEGEND

- DRIVEWAY NUMBER (SEE DRIVEWAY TABLE SHEET FOR MORE INFORMATION)
- PROP LIMITS OF ASPHALT TRANSITION PAVEMENT

PROJECT BENCHMARK DATA:

CITY OF HOUSTON MONUMENT NO. 5260-8208, A TYPE 48 MARK LOCATED ON THE NORTHEAST CORNER OF ALBA ROAD AND SUB BARNETT DRIVE. ELEVATION = 74.48' (NAVD83/CORS 2011 ADJ.)

TO ARRANGE FOR LINES TO BE TURNED OFF OR MOVED, CALL CENTERPOINT AT 713-207-2222.

PRIVATE UTILITY LINES SHOWN

AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET B.O.M. OR EASEMENTS CALL THE ONE STOP NOTIFICATION 713-233-6647.

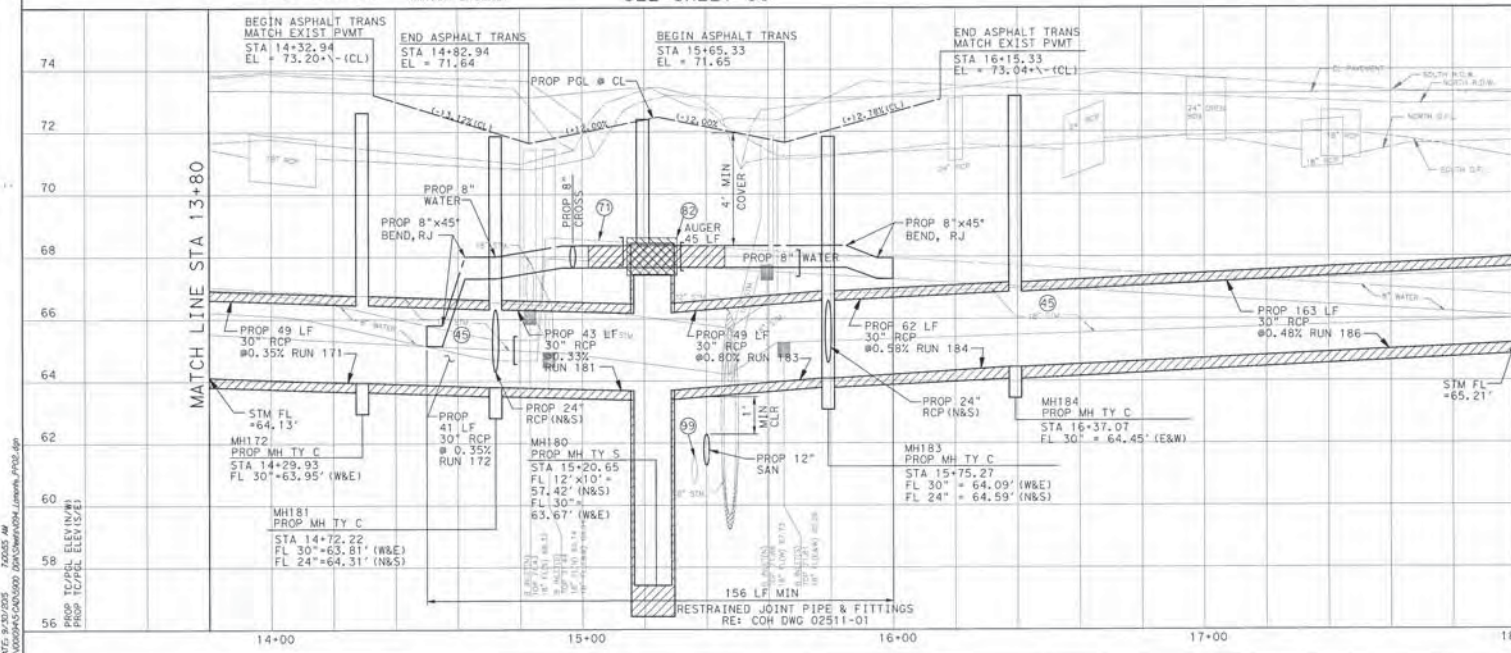
APPROVED FOR AT&T TELECOM/UNDERGROUND CONDUIT FACILITIES ONLY

DATE: 10/11/15

APPROVED FOR UNDERGROUND ELECTRICITY FACILITIES VERIFICATION ONLY

THIS SIGNATURE VERIFIES EXISTING UNDERGROUND FACILITIES NOT TO BE USED FOR COMPLETE VERIFICATION. SIGNATURE VALID FOR SIX MONTHS.

DATE: 10/11/15



SDPS
Houston Storm Drainage Program Support

PGAL
3131 BRIDGEMAN SUITE 200
HOUSTON, TEXAS 77042
PHONE (713) 822-1444
FAX (713) 968-9333

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

LAMONTE LN PLAN & PROFILE STA 13+80 TO STA 18+00

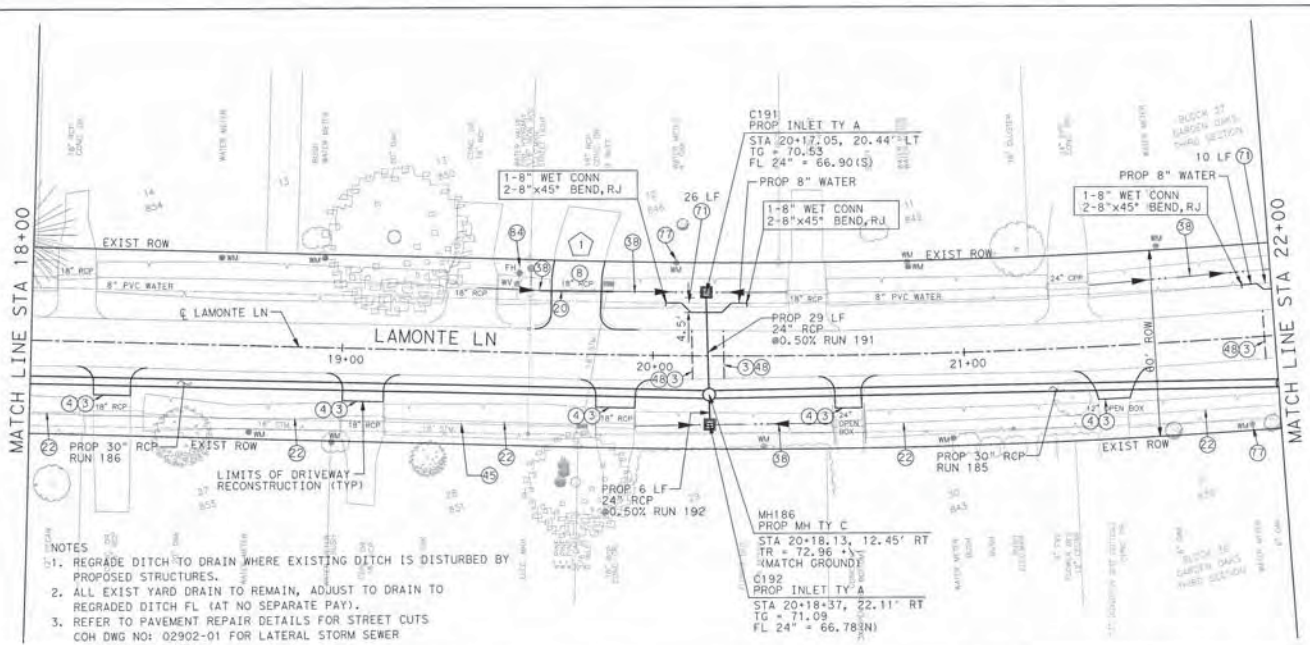
WBS NUMBER
M-000285-0001-4

DRAWING SCALE
HORIZ. 1"=20' VERT. 1"=2'

CITY OF HOUSTON PW
JEFFREY T. HALL, P.E.
SHEET NO. 108 OF 385

55630

DATE: 9/23/2015 7:05:58 AM
A:\MDD\AS\CON\0001_DRA\GARDEN\Drawn_PWD.dwg



- NOTES:**
- FOR HORIZONTAL ALIGNMENT DATA, SEE GEOMETRIC DATA SUMMARY. (SHEET NO. 5-9).
 - CURB INLETS & PAVEMENT CALLOUTS ARE TO FACE OF CURB OR EDGE OF PAVT UNLESS NOTED OTHERWISE.
 - REFER TO CROSS STREET PLAN AND PROFILE SHEETS FOR SIDESTREET DRAINAGE AND PAVING INFORMATION.
 - REFER TO DEMOLITION PLAN, (SHEET NO. 173-183) FOR STORM REMOVAL LIMITS IN ACCORDANCE WITH COH STD SPEC SECTION 02221, AND PAVEMENT REMOVAL LIMITS.

- LEGEND**
- DRIVEWAY NUMBER (SEE DRIVEWAY TABLE SHEET FOR MORE INFORMATION)
 - PROP LIMITS OF ASPHALT TRANSITION PAVEMENT

- NOTES**
- REGRADE DITCH TO DRAIN WHERE EXISTING DITCH IS DISTURBED BY PROPOSED STRUCTURES.
 - ALL EXIST YARD DRAIN TO REMAIN, ADJUST TO DRAIN TO REGRADED DITCH FL (AT NO SEPARATE PAY).
 - REFER TO PAVEMENT REPAIR DETAILS FOR STREET CUTS
- COH DWG NO: 02902-01 FOR LATERAL STORM SEWER CONSTRUCTION WORK.

MH186
PROP MH TY C
STA 20+18.13, 12.45' RT
TR = 72.96'
(MATCH GROUND)

C192
PROP INLET TY A
STA 20+18.37, 22.11' RT
TG = 71.09
FL 24" = 66.78(N)

PROJECT BENCHMARK DATA:
CITY OF HOUSTON MONUMENT NO. 5260-8208, A TYPE 46 MARK LOCATED ON THE NORTHEAST CORNER OF ALBA ROAD AND SUE BARNETT DRIVE. ELEVATION = 74.48' (NAVD88/CORS 2011 ADJ.)

TO ARRANGE FOR LINES TO BE TURNED OFF OR MOVED, CALL CENTERPOINT AT 713-207-2222.

PRIVATE UTILITY LINES SHOWN
AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.W. OR EASEMENTS CALL THE ONE-CALL NOTIFICATION 713-027-0461.

CONDUCTOR/ENGINEER/NATURAL GAS FACILITIES VERIFICATION ONLY. THIS SIGNATURE VERIFIES EXISTING UNDERGROUND FACILITIES NOT TO BE USED FOR CONFLICT VERIFICATION. 1 GAS SERVICE LINES ARE NOT SHOWN. SIGNATURE VALID FOR 30 MONTHS.

[Signature] DATE: 10-20-15

APPROVED FOR AT&T TEXAS/WEST UNDERGROUND CONDUIT FACILITIES ONLY.
SIGNATURE VALID FOR ONE YEAR

[Signature] DATE: 10-20-15

CONDUCTOR/ENGINEER/UNDERGROUND ELECTRICAL FACILITIES VERIFICATION ONLY. THIS SIGNATURE VERIFIES EXISTING UNDERGROUND FACILITIES NOT TO BE USED FOR CONFLICT VERIFICATION. 1 GAS SERVICE LINES ARE NOT SHOWN. SIGNATURE VALID FOR 30 MONTHS.

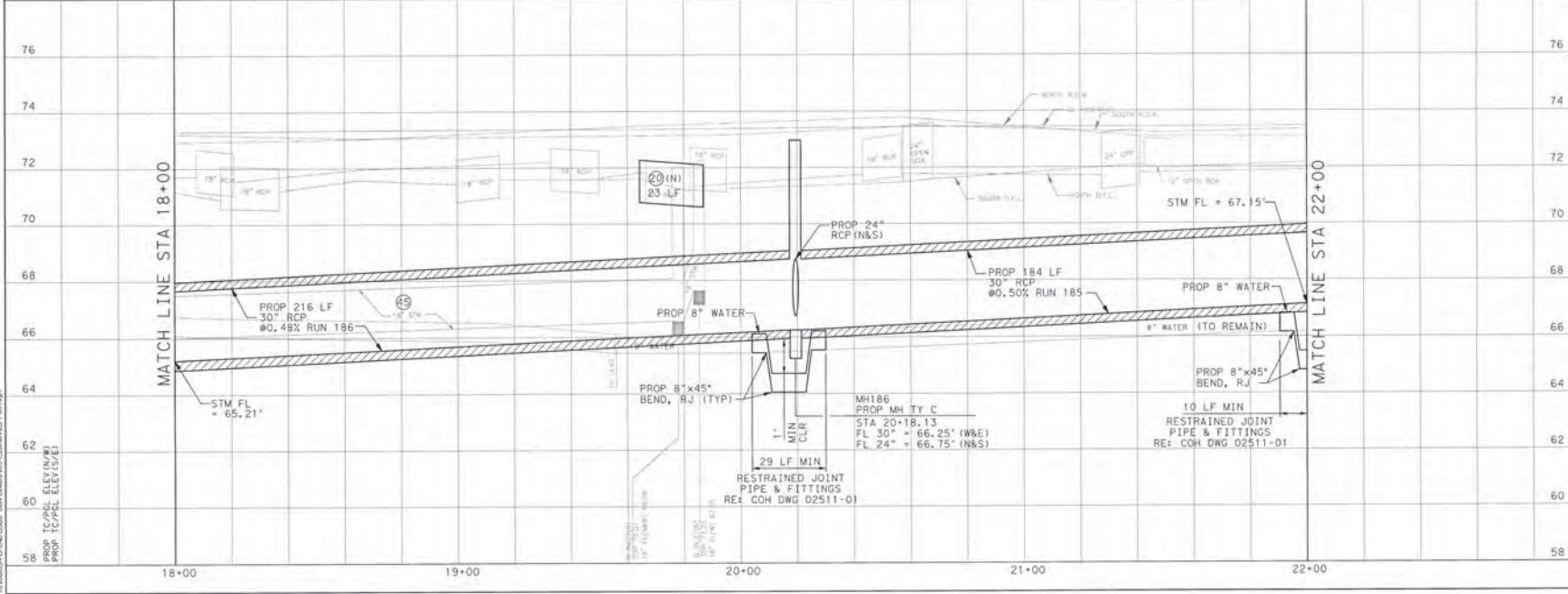


CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

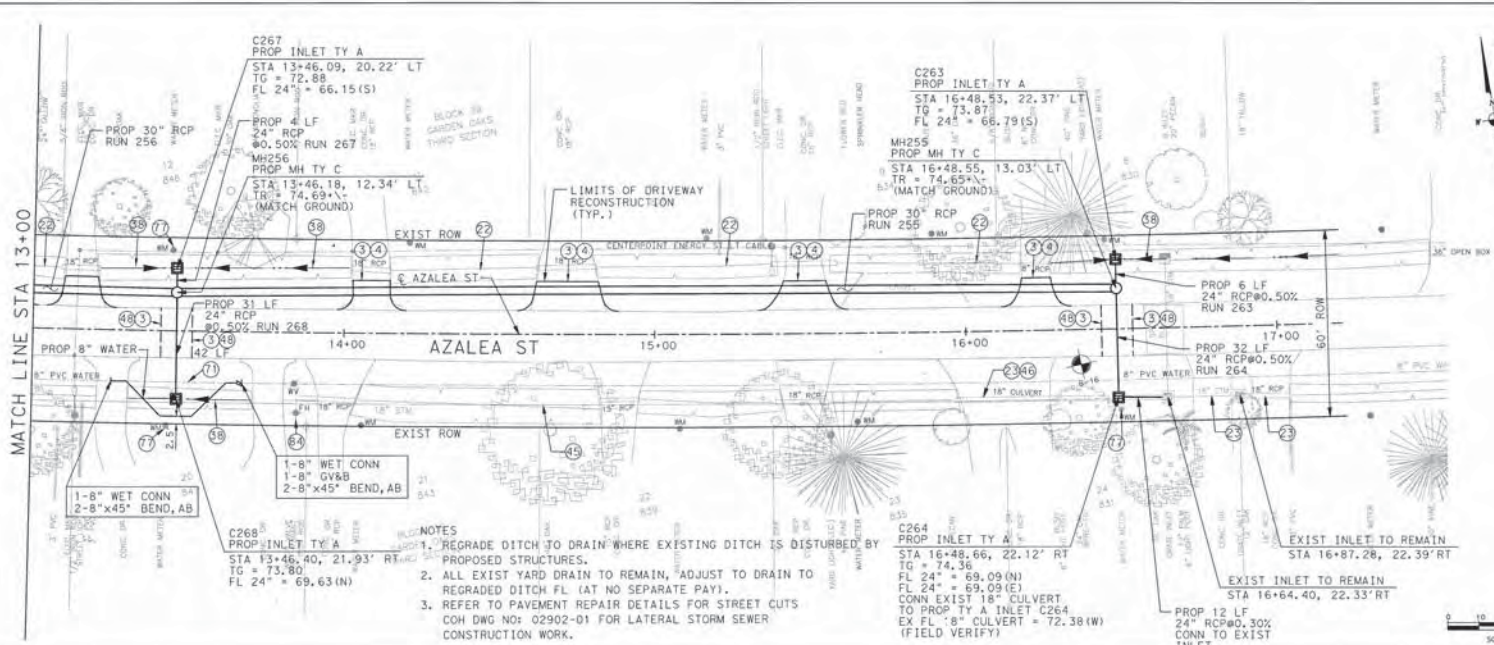
GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

LAMONTE LN
PLAN & PROFILE
STA 18+00 TO STA 22+00

WBS NUMBER	
M-000285-0001-4	
DRAWING SCALE	
HORIZ. 1"=20'	VERT. 1"=2'
CITY OF HOUSTON PM	
JEFFREY T. HALL, P.E.	
SHEET NO. 109 OF 385	



DATE: 10/16/15
 DWG NO: 02902-01
 PROJECT: GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING



- NOTES:**
- FOR HORIZONTAL ALIGNMENT DATA, SEE GEOMETRIC DATA SUMMARY. (SHEET NO. 5-9).
 - CURB INLETS & PAVEMENT CALLOUTS ARE TO FACE OF CURB OR EDGE OF PVTM UNLESS NOTED OTHERWISE.
 - REFER TO CROSS STREET PLAN AND PROFILE SHEETS FOR SIDE STREET DRAINAGE AND PAVING INFORMATION.
 - REFER TO DEMOLITION PLAN, (SHEET NO. 173-183) FOR STORM REMOVAL LIMITS IN ACCORDANCE WITH COH STD SPEC SECTION 02221. AND PAVEMENT REMOVAL LIMITS.

- LEGEND**
- DRIVEWAY NUMBER (SEE DRIVEWAY TABLE FOR MORE INFORMATION)
 - PROP LIMITS OF ASPHALT TRANSITION PAVEMENT

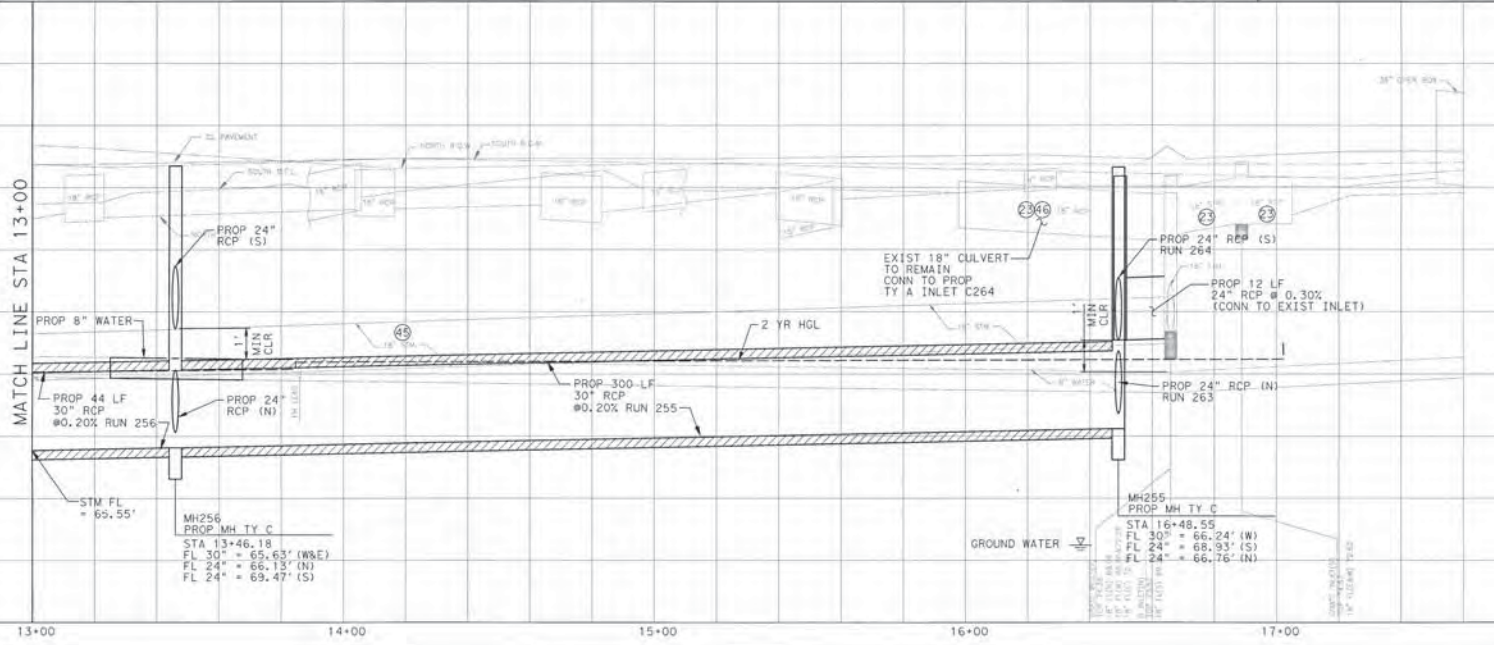
BM: PNT. NO. 48
 SET 3/6 TR W/CAP
 ELEV. = 74.80

PROJECT BENCHMARK DATA:
 CITY OF HOUSTON MONUMENT NO. 5260-8208,
 A TYPE 4A MARK LOCATED ON THE
 NORTHEAST CORNER OF ALBA ROAD AND
 SUE BARNETT DRIVE. ELEVATION = 74.48'
 (NAVDB/CORS 2011 ADJ.1)

TO ARRANGE FOR LINES TO BE TURNED OFF OR
 MOVED, CALL CENTERPOINT AT 713-207-2222.

PRIVATE UTILITY LINES SHOWN
 AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET & O.W. OR
 EASMENTS CALL THE LOCAL STAR NOTIFICATION 713-207-4647.

DATE: 10-20-15



DATE: 10-20-15

APPROVED FOR AT&T TEXAS/STREET UNDERGROUND CONDUIT
 FACILITIES ONLY.
 SIGNATURE VALID FOR ONE YEAR

DATE: 10-20-15

CENTERPOINT ENERGY/UNDERGROUND ELECTRICAL FACILITIES
 VERIFICATION ONLY.
 OTHER SIGNATURE VERIFIED EXISTING UNDERGROUND FACILITIES-
 NOT TO BE USED FOR COMPLETE VERIFICATION.
 SIGNATURE VALID FOR SIX MONTHS.

SDPS
 Houston Storm Drainage
 Program Support

PGAL
 3131 BRANBANK, SUITE 200
 HOUSTON, TEXAS 77052
 PHONE (713) 622-1444
 FAX (713) 949-8333

INSPECTED BY: LANGTECH
 FB NO. 9-5576

CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND
 SHEPHERD PARK (CENTRAL)
 DRAINAGE AND PAVING

**AZALEA ST
 PLAN & PROFILE
 STA 13+00 TO END**

WSS NUMBER
 M-000285-0001-4

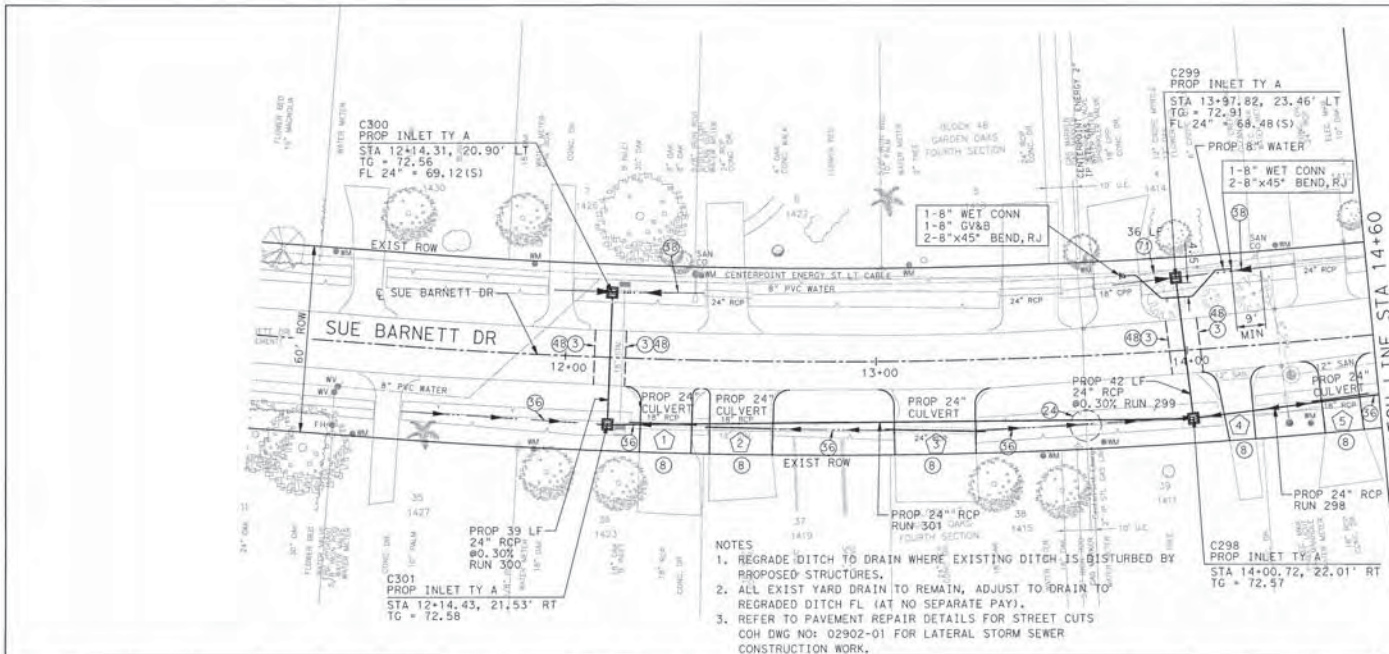
DRAWING SCALE
 HORIZ. 1"=20' VERT. 1"=2'

CITY OF HOUSTON PM
 JEFFREY T. HALL, P.E.

SHEET NO. 115 OF 385

DATE: 07/06/2015 03:30:17 PM
 \\V000000\CAD\2015\03\Drawings\Aznalea_Plan_Profile.dwg

DATE: 01/16/2015 2:30:27 PM
 R:\000045-CAD\5000_DWG\Drawn\004_SueBarnett_P10.dwg



- NOTES**
1. REGRADE DITCH TO DRAIN WHERE EXISTING DITCH IS DISTURBED BY PROPOSED STRUCTURES.
 2. ALL EXIST YARD DRAIN TO REMAIN, ADJUST TO DRAIN TO REGRADED DITCH FL (AT NO SEPARATE PAY).
 3. REFER TO PAVEMENT REPAIR DETAILS FOR STREET CUTS COH DWG NO: 02902-01 FOR LATERAL STORM SEWER CONSTRUCTION WORK.



- NOTES:**
1. FOR HORIZONTAL ALIGNMENT DATA, SEE GEOMETRIC DATA SUMMARY, (SHEET NO. 5-9).
 2. CURB INLETS & PAVEMENT CALLOUTS ARE TO FACE OF CURB OR EDGE OF PAVT UNLESS NOTED OTHERWISE.
 3. REFER TO CROSS STREET PLAN AND PROFILE SHEETS FOR SIDE STREET DRAINAGE AND PAVING INFORMATION.
 4. REFER TO DEMOLITION PLAN, (SHEET NO. 173-183) FOR STORM REMOVAL LIMITS IN ACCORDANCE WITH COH STD SPEC SECTION 02221, AND PAVEMENT REMOVAL LIMITS.

- LEGEND**
- DRIVEWAY NUMBER (SEE DRIVEWAY TABLE SHEET FOR MORE INFORMATION)
 - PROP LIMITS OF ASPHALT TRANSITION PAVEMENT

TBM PNT. NO. 50
 SET 3/8" IR W/CAP
 STA 12+14.23' RT SUE BARNETT DR.
 ELEV. = 75.19

PROJECT BENCHMARK DATA:
 CITY OF HOUSTON MONUMENT NO. 5260-8208,
 A TYPE AA MARK LOCATED ON THE
 NORTHEAST CORNER OF ALBA ROAD AND
 SUE BARNETT DRIVE. ELEVATION = 74.48'
 (NAVD88/CORS 2011 ADJ.)

TO ARRANGE FOR LINES TO BE TURNED OFF OR
 MOVED, CALL CENTERPOINT AT 713-207-2222.

PRIVATE UTILITY LINES SHOWN
 AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.W. OR
 EASEMENTS CALL THE LONG STAR VERIFICATION 713-223-0261.

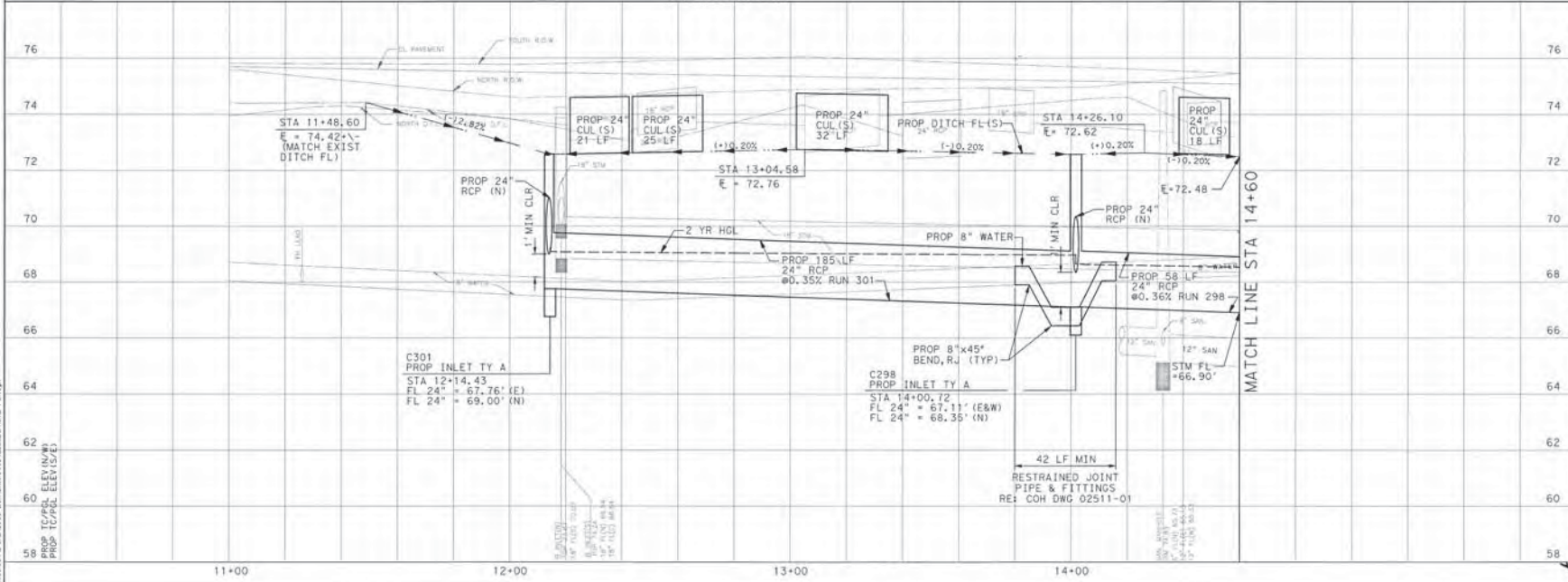
[Signature] DATE: 10-20-15

[Signature] DATE: 10-20-15

APPROVED FOR AT&T TEXAS/UNT UNDERGROUND CONDUIT
 FACILITIES ONLY.
 SIGNATURE VALID FOR ONE YEAR

[Signature] DATE: 10-20-15

APPROVED FOR UNDERGROUND ELECTRICAL FACILITIES
 VERIFICATION ONLY.
 THIS SIGNATURE VERIFIES EXISTING UNDERGROUND FACILITIES -
 NOT TO BE USED FOR COMPLETE VERIFICATION.
 SIGNATURE VALID FOR SIX MONTHS.



SDPS
 Houston Storm Drainage
 Program Support

PGAL
 2015, 2016, 2017
 3131 BROADBANK, SUITE 200
 HOUSTON, TEXAS 77002
 Phone (713) 822-1444
 Fax (713) 866-9333

CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND
 SHEPHERD PARK (CENTRAL)
 DRAINAGE AND PAVING

SUE BARNETT DR
 PLAN & PROFILE
 BEGIN TO STA 14+60

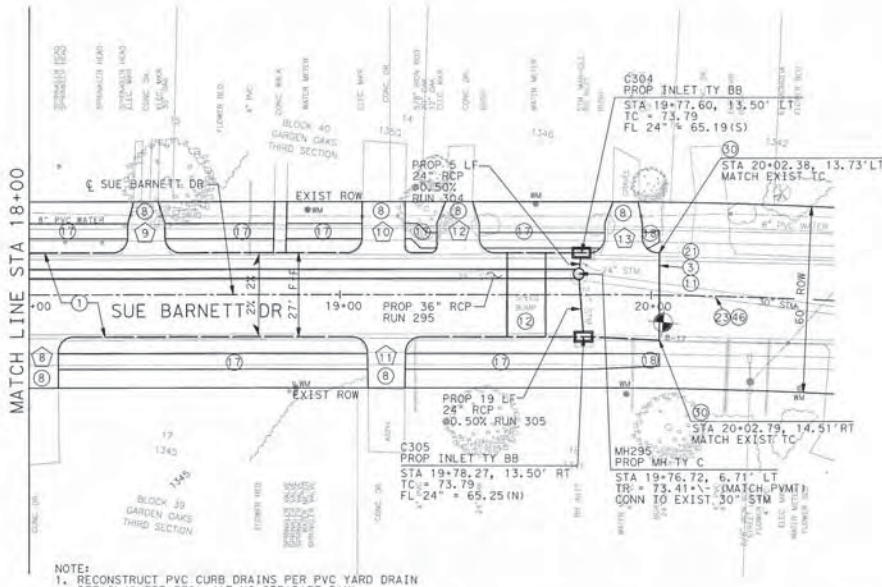
WBS NUMBER
 M-000285-0001-4

DRAWING SCALE
 HORIZ. 1"=20' VERT. 1"=2'

CITY OF HOUSTON PM
 JEFFREY T. HALL, P.E.

SHEET NO. 114 OF 385

55630



NOTE:
1. RECONSTRUCT PVC CURB DRAINS PER PVC YARD DRAIN DETAIL (SHEET 3701). (AT NO SEPARATE PAY).

- NOTES:**
- FOR HORIZONTAL ALIGNMENT DATA, SEE GEOMETRIC DATA SUMMARY, (SHEET NO. 5-9).
 - CURB INLETS & PAVEMENT CALLOUTS ARE TO FACE OF CURB OR EDGE OF PWT UNLESS NOTED OTHERWISE.
 - REFER TO CROSS STREET PLAN AND PROFILE SHEETS FOR SIDESTREET DRAINAGE AND PAVING INFORMATION.
 - REFER TO DEMOLITION PLAN, (SHEET NO. 173-183) FOR STORM REMOVAL LIMITS IN ACCORDANCE WITH COM STD SPEC SECTION 02221, AND PAVEMENT REMOVAL LIMITS.

- LEGEND**
- DRIVEWAY NUMBER (SEE DRIVEWAY TABLE SHEET FOR MORE INFORMATION)
 - PROPOSED LIMITS OF ASPHALT TRANSITION PAVEMENT

TRM PNT. NO. 49
SET 3/4\"/>

PROJECT BENCHMARK DATA:
CITY OF HOUSTON MONUMENT NO. 5260-8208, A TYPE 44 MARK LOCATED ON THE NORTHEAST CORNER OF ALBA ROAD AND SUE BARNETT DRIVE. ELEVATION = 74.48' (NAVD83/COORDS 2011 ADJ.)

TO ARRANGE FOR LINES TO BE TURNED OFF OR MOVED, CALL CENTERPOINT AT 713-207-2222.

PRIVATE UTILITY LINES SHOWN
AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.W. OR BASEMENTS CALL THE ONE STOP NOTIFICATION 713-223-4567.

APPROVED FOR AT&T TEXAS/SMIT UNDERGROUND CONDUIT FACILITIES ONLY.
SIGNATURE VALID FOR ONE YEAR

DATE: 10/1/15

APPROVED FOR HOUSTON PROGRAMME ELECTRICAL FACILITIES VERIFICATION ONLY.
THIS SIGNATURE VERIFIES EXISTING UNDERGROUND FACILITIES - NOT TO BE USED FOR COMPLEX VERIFICATION.
SIGNATURE VALID FOR SIX MONTHS.

DATE: 10/1/15



SURVEYED BY: LANDTECH
FBI NO. P-5576

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

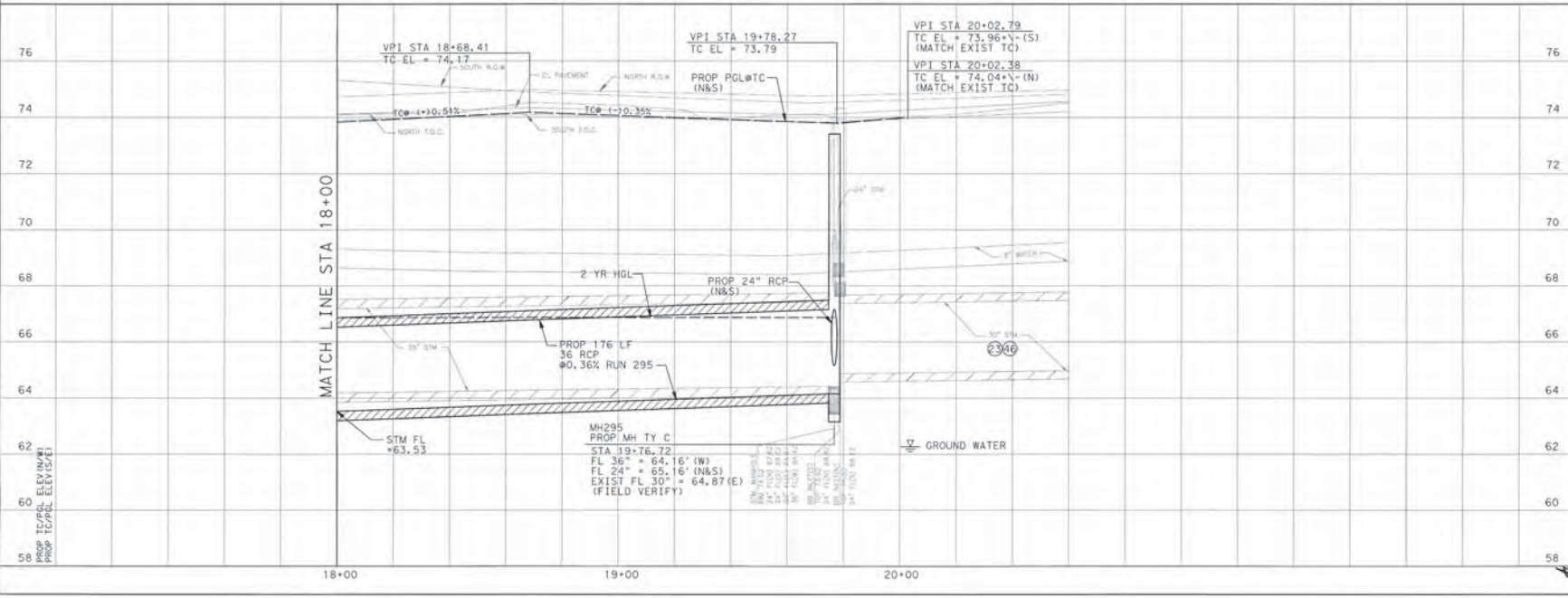
SUE BARNETT DR
PLAN & PROFILE
STA 18+00 TO END

WSS NUMBER
M-000285-0001-4

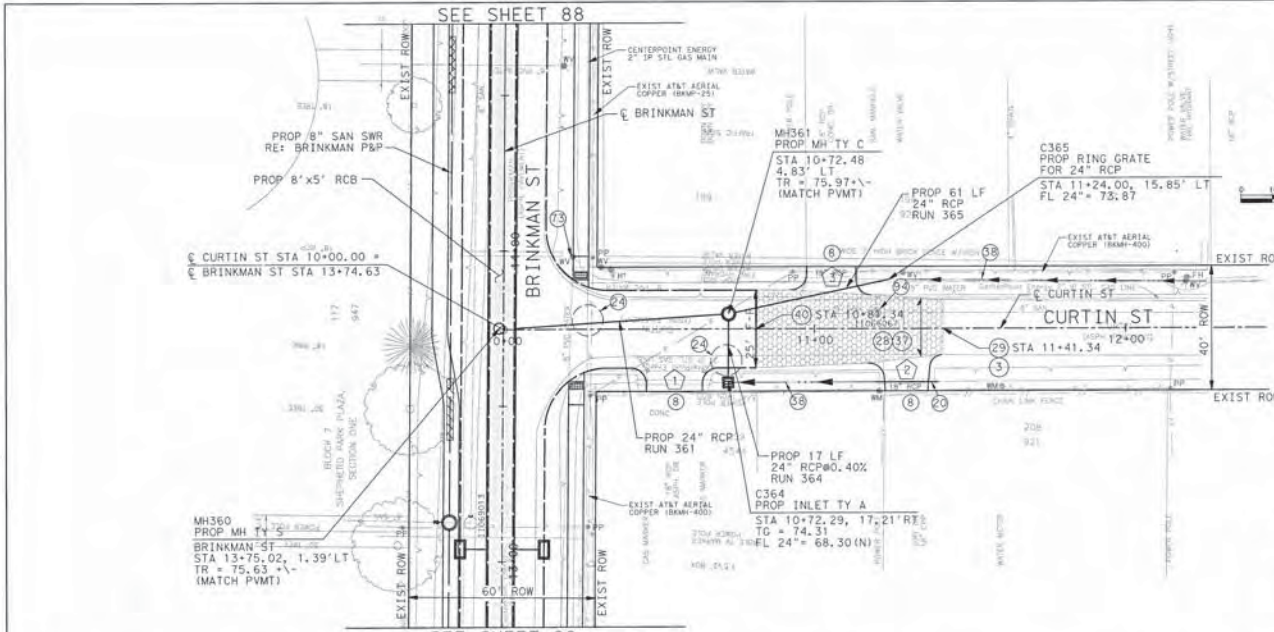
DRAWING SCALE
HORIZ. 1\"/>

55630

CITY OF HOUSTON PM
JEFFREY T. HALL, P.E.
SHEET NO. 116 OF 385



DATE: 9/10/2015 7:02:07 AM
R:\PROJECTS\1504050000_DRAIN\DWG\101M_SueBarnett_PWD.dwg



- NOTES
1. REGRADE DITCH TO DRAIN WHERE EXISTING DITCH IS DISTURBED BY PROPOSED STRUCTURES.
 2. ALL EXIST YARD DRAIN TO REMAIN, ADJUST TO DRAIN TO REGRADED DITCH FL (AT NO SEPARATE PAY)

- NOTES:
1. FOR HORIZONTAL ALIGNMENT DATA, SEE GEOMETRIC DATA SUMMARY, (SHEET NO. 5-9).
 2. CURB INLETS & PAVEMENT CALLOUTS ARE TO FACE OF CURB OR EDGE OF PAVT UNLESS NOTED OTHERWISE.
 3. REFER TO CROSS STREET PLAN AND PROFILE SHEETS FOR SIDEWALK DRAINAGE AND PAVING INFORMATION.
 4. REFER TO DEMOLITION PLAN, (SHEET NO. 173-183) FOR STORM REMOVAL LIMITS IN ACCORDANCE WITH COH STD SPEC SECTION 02221. AND PAVEMENT REMOVAL LIMITS.

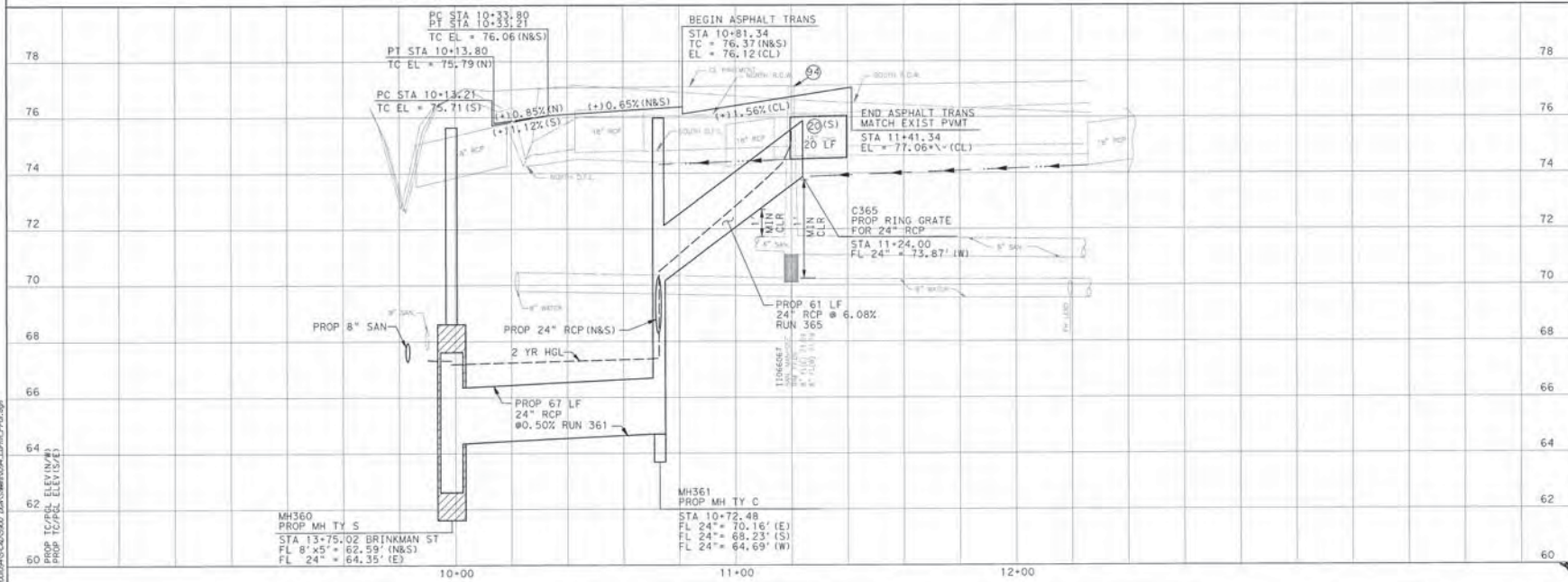
- LEGEND
- DRIVEWAY NUMBER (SEE DRIVEWAY TABLE SHEET FOR MORE INFORMATION)
 - PROP LIMITS OF ASPHALT TRANSITION PAVEMENT

TBM PNT. NO. 23
 SET MAG. NAIL W/SHISHER
 STA 13+89.43, 12.37' RT BRINKMAN ST.
 STA 10+12.31, 14.45' LT CURTIN AVE.
 EL. V. = 76.84

PROJECT BENCHMARK DATA:
 CITY OF HOUSTON MONUMENT NO. 5260-8208,
 A TYPE 4A MARK LOCATED ON THE
 NORTHEAST CORNER OF ALBA ROAD AND
 SUE BARNETT DRIVE. ELEVATION = 74.48'
 (NAVD88/CORS 2011 ADJ.)

TO ARRANGE FOR LINES TO BE TURNED OFF OR MOVED, CALL CENTERPOINT AT 713-207-2222.

PRIVATE UTILITY LINES SHOWN
 AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET B.O.W. OR
 EASEMENTS CALL THE ONE CALL NOTIFICATION 113-233-6667.



DATE: 10/10

DATE: 10/10

DATE: 10/10

APPROVED FOR AT&T TELESERVICE UNDERGROUND CONDUIT FACILITIES ONLY
 SIGNATURE VALID FOR ONE YEAR

APPROVED FOR AT&T TELESERVICE UNDERGROUND CONDUIT FACILITIES ONLY
 SIGNATURE VALID FOR ONE YEAR

APPROVED FOR AT&T TELESERVICE UNDERGROUND CONDUIT FACILITIES ONLY
 SIGNATURE VALID FOR ONE YEAR

APPROVED FOR AT&T TELESERVICE UNDERGROUND CONDUIT FACILITIES ONLY
 SIGNATURE VALID FOR ONE YEAR

SDPS
 Houston Storm Drainage Program Support

PGAL
 3131 BRANNING, SUITE 200
 HOUSTON, TEXAS 77052
 Phone (713) 822-1444
 Fax (713) 988-9333

CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

CURTIN ST
 PLAN & PROFILE

WBS NUMBER
 M-000285-0001-4

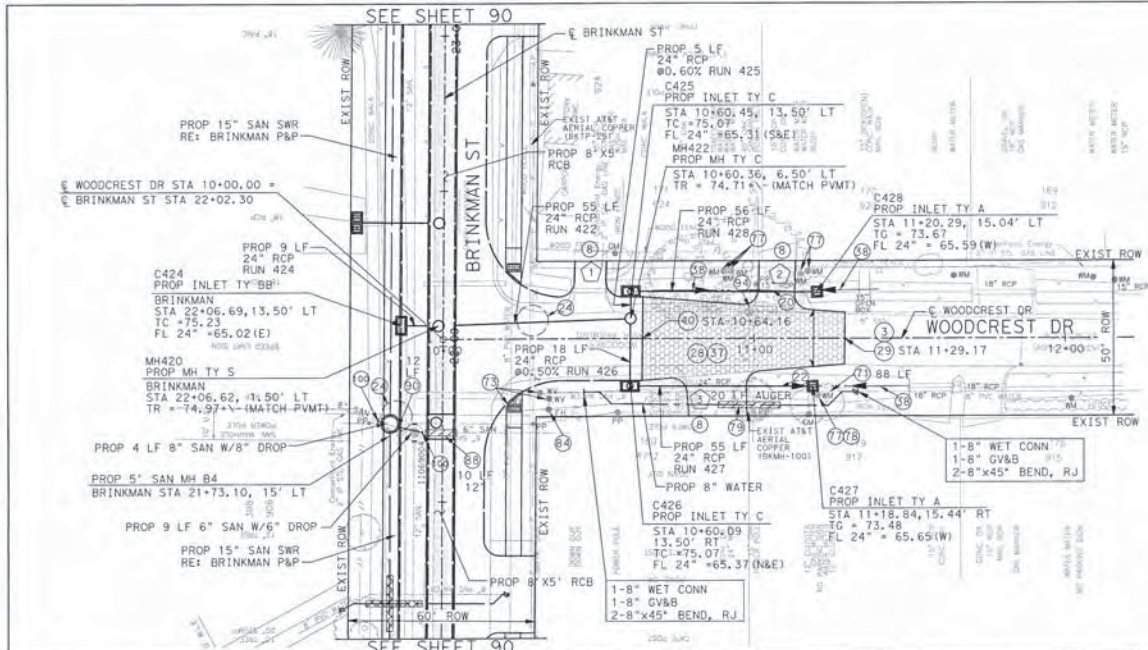
DRAWING SCALE
 HORIZ. 1"=20' VERT. 1"=2'

CITY OF HOUSTON PM
 JEFFREY T. HALL, P.E.

SHEET NO. 118 OF 385

55630

DATE: 9/30/2015 7:04:56 AM
 AM000285-0001-0001-DWG-CURTIN.DWG-CPPE.dwg



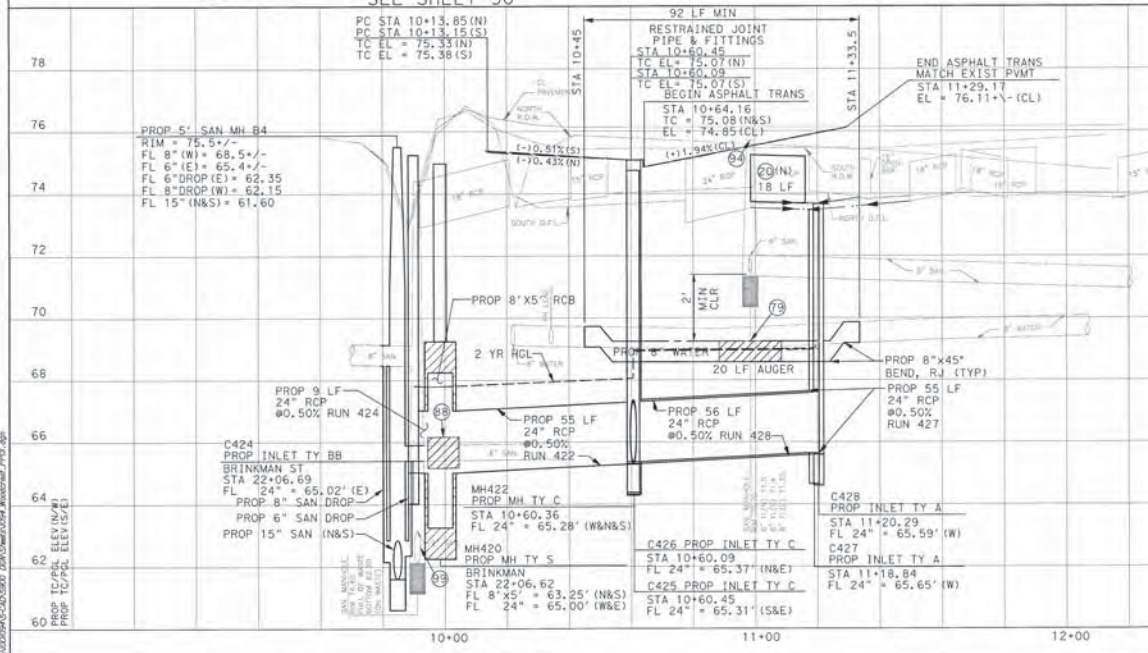
- NOTES:**
- FOR HORIZONTAL ALIGNMENT DATA, SEE GEOMETRIC DATA SUMMARY. (SHEET NO. 5-9).
 - CURB INLETS & PAVEMENT CALLOUTS ARE TO FACE OF CURB OR EDGE OF PAVT UNLESS NOTED OTHERWISE.
 - REFER TO CROSS STREET PLAN AND PROFILE SHEETS FOR SIDESTREET DRAINAGE AND PAVING INFORMATION.
 - REFER TO DEMOLITION PLAN, (SHEET NO. 173-183) FOR STORM REMOVAL LIMITS IN ACCORDANCE WITH COM STD SPEC SECTION 02221, AND PAVEMENT REMOVAL LIMITS.

- LEGEND**
- DRIVEWAY NUMBER (SEE DRIVEWAY TABLE SHEET FOR MORE INFORMATION)
 - PROP LIMITS OF ASPHALT TRANSITION PAVEMENT

TBM: PNT. NO. 25
 SET 3/8" IR W/CAP
 STA 10+60.36, 3.85' LT BRINKMAN ST.
 ELEV. = 75.78

PROJECT BENCHMARK DATA:
 CITY OF HOUSTON MONUMENT NO. 5260-8208,
 A TYPE AA MARK LOCATED ON THE
 NORTHEAST CORNER OF ALBA ROAD AND
 SUE BARNETT DRIVE. ELEVATION = 74.48'
 (NAVDBS/CORS 2011 ADJ.)

- NOTES**
- REGRADE DITCH TO DRAIN WHERE EXISTING DITCH IS DISTURBED BY PROPOSED STRUCTURES.
 - ALL EXIST YARD DRAIN TO REMAIN, ADJUST TO DRAIN TO REGRADED DITCH FL (AT NO SEPARATE PAY)



TO ARRANGE FOR LINES TO BE TURNED OFF OR MOVED, CALL CENTERPOINT AT 713-297-2222.

PRIVATE UTILITY LINES SHOWN
 AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.W. OR EASEMENTS CALL THE ONE-CALL NOTIFICATION 713-693-4564.

[Signature] DATE: 10/1/15
 APPROVED FOR AT&T TEXAS/STREET UNDERGROUND CONDUIT FACILITIES ONLY
 SIGNATURE VALID FOR ONE YEAR

[Signature] DATE: 10/1/15
 APPROVED FOR AT&T TEXAS/STREET UNDERGROUND CONDUIT FACILITIES ONLY
 THIS SIGNATURE VERIFIES THAT YOU HAVE SHOWN ALL NATURAL GAS LINES CORRECTLY AND TO BE USED FOR COMPLECT VERIFICATION. (GAS SERVICE LINES ARE NOT SHOWN.)
 SIGNATURE VALID FOR SIX MONTHS.

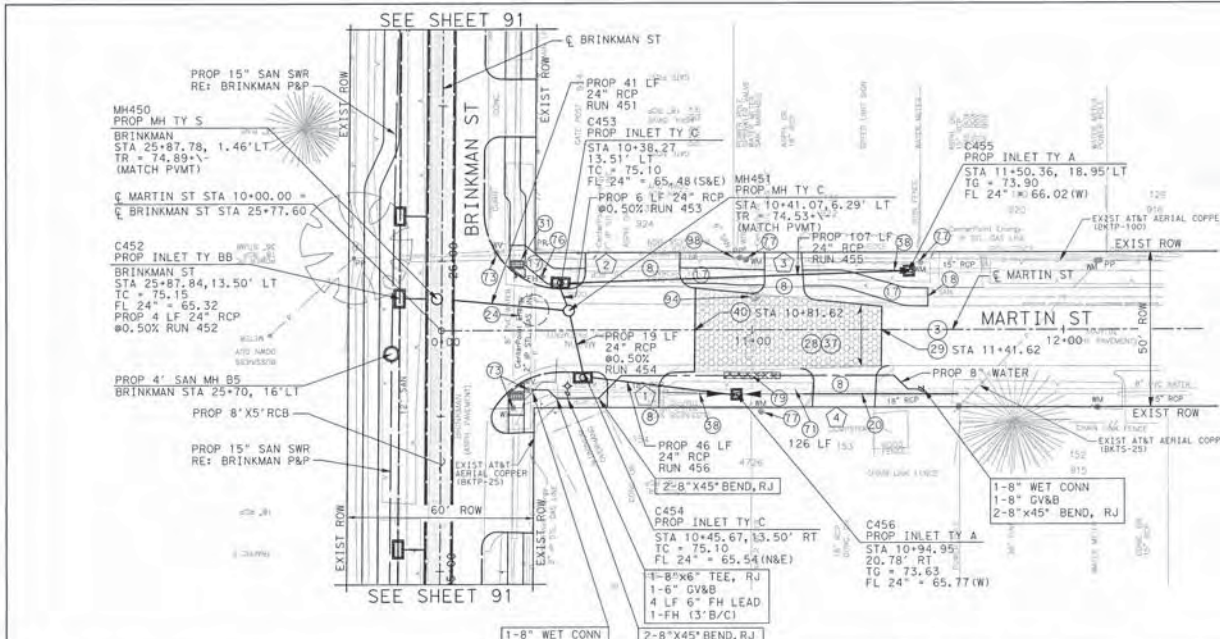


CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

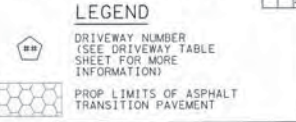
GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING
 WOODCREST DR
 PLAN & PROFILE

WBS NUMBER	M-000285-0001-4
DRAWING SCALE	HORIZ. 1"=20' VERT. 1"=2'
CITY OF HOUSTON PM	JEFFREY T. HALL, P.E.
SHEET NO. 120 OF 385	

DATE: 9/10/2015 7:03:12 AM
 PROJECT: SDPS-CAD-0001-DWG:WOODCREST.DRAINAGE.PDF



- NOTES:**
- FOR HORIZONTAL ALIGNMENT DATA, SEE GEOMETRIC DATA SUMMARY. (SHEET NO. 5-9).
 - CURB INLETS & PAVEMENT CALLOUTS ARE TO FACE OF CURB OR EDGE OF PAVT UNLESS NOTED OTHERWISE.
 - REFER TO CROSS STREET PLAN AND PROFILE SHEETS FOR SIDESTREET DRAINAGE AND PAVING INFORMATION.
 - REFER TO DEMOLITION PLAN, (SHEET NO. 173-183) FOR STORM REMOVAL LIMITS IN ACCORDANCE WITH COH STD SPEC SECTION 02221. AND PAVEMENT REMOVAL LIMITS.



BM PNT. NO. 26
 SET 3/8" IR W/CAP
 STA 25+76.85, 23.06' LT
 ELEV. = 76.84

PROJECT BENCHMARK DATA:
 CITY OF HOUSTON MONUMENT NO. 5260-8208,
 A TYPE 4A MARK LOCATED ON THE
 NORTHEAST CORNER OF ALBA ROAD AND
 SUE BARNETT DRIVE. ELEVATION = 74.48'
 (NAVORS/CORS 2011 ADJ.)

TO ARRANGE FOR LINES TO BE TURNED OFF OR
 MOVED, CALL CENTERPOINT AT 713-207-2222.

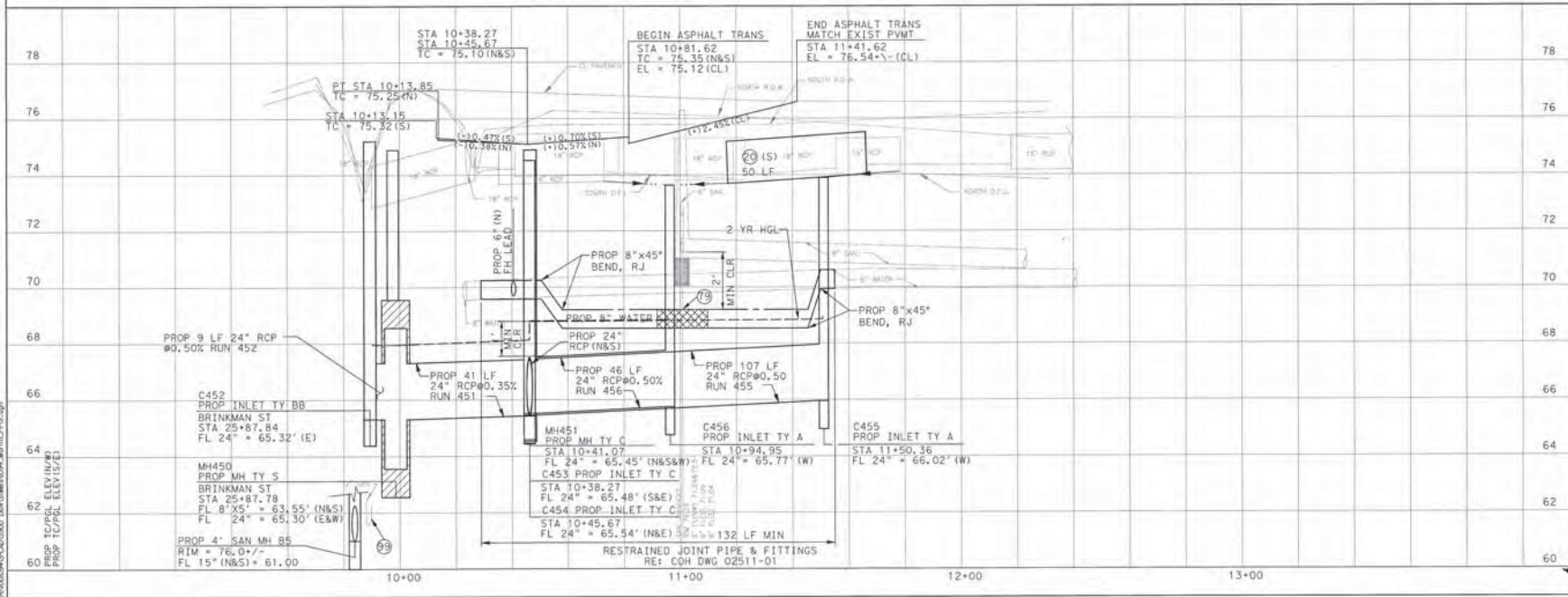
- NOTES**
- REGRADE DITCH WHERE EXISTING DITCH IS DISTURBED BY PROPOSED STRUCTURES.
 - ALL EXIST YARD DRAIN TO REMAIN, ADJUST TO DRAIN TO REGRADED DITCH FL (AT NO SEPARATE PAY)

PRIVATE UTILITY LINES SHOWN
 AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.W. OR
 EASEMENTS CALL THE ONE-CALL NOTIFICATION 713-223-4547.

[Signature] DATE: 01/15
 (SEAL) ENGINEER/ANNUAL GAS FACILITIES VERIFICATION ONLY.
 THIS SIGNATURE VERIFIES THAT YOU HAVE DONE CMP NATURAL
 GAS LINES CORRECTLY. NOT TO BE USED FOR CONFLICT
 VERIFICATION. (GAS SERVICE LINES ARE NOT SHOWN.)
 SIGNATURE VALID FOR SIX MONTHS.

[Signature] DATE: 01/15
 APPROVED FOR AT&T TEXAS/UTB UNDERGROUND CONDUIT
 FACILITIES ONLY.
 SIGNATURE VALID FOR ONE YEAR

[Signature] DATE: 01/15
 DEVELOPMENT ENGINEER/UNDERGROUND ELECTRICAL FACILITIES
 VERIFICATION ONLY.
 THIS SIGNATURE VERIFIES EXISTING UNDERGROUND FACILITIES
 NOT TO BE USED FOR CONFLICT VERIFICATION.
 SIGNATURE VALID FOR SIX MONTHS.



SDPS
 Houston Storm Drainage
 Program Support

PGAL
 3131 BRADSHAW, SUITE 200
 HOUSTON, TEXAS 77042
 PHONE (713) 622-1444
 FAX (713) 988-9333

CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

**GARDEN OAKS AND
 SHEPHERD PARK (CENTRAL)
 DRAINAGE AND PAVING**

**MARTIN ST
 PLAN & PROFILE**

WBS NUMBER
 M-000285-0001-4

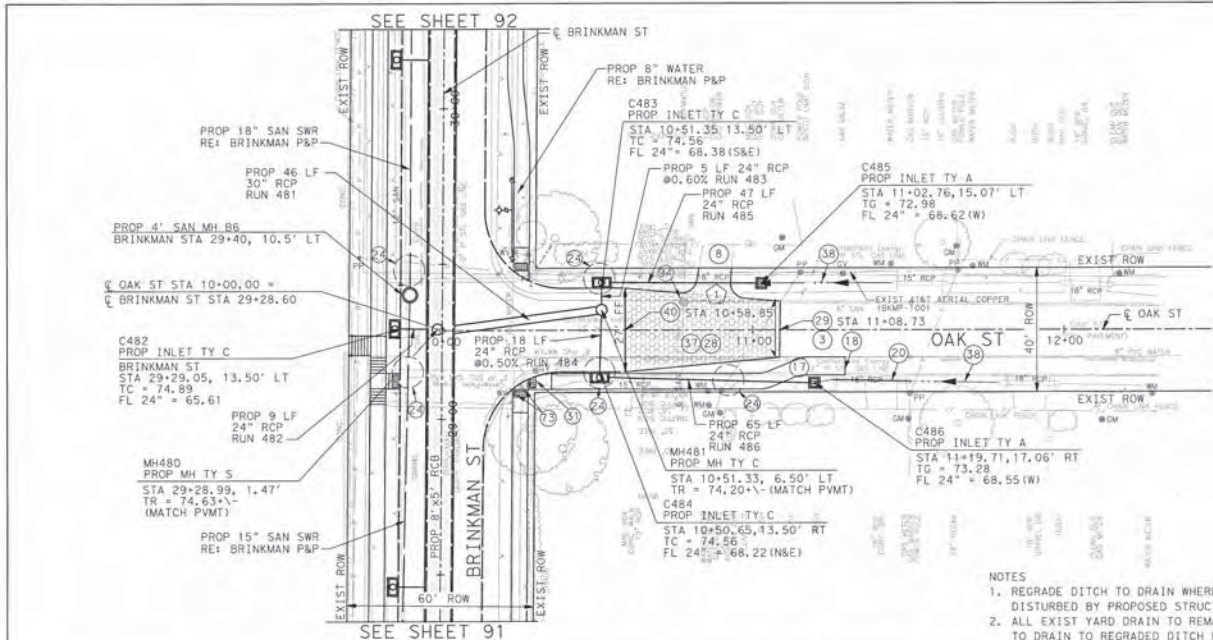
DRAWING SCALE
 HORIZ. 1"=20' VERT. 1"=2'

CITY OF HOUSTON PM
 JEFFREY T. HALL, P.E.

SHEET NO. 121 OF 385

55630

DATE: 01/07/2015 7:50:36 AM
 A:\MS2015\CAD\03000_Drain\Drawings\DWG\Plan_Profile.dwg



- NOTES:**
- FOR HORIZONTAL ALIGNMENT DATA, SEE GEOMETRIC DATA SUMMARY. (SHEET NO. 5-9).
 - CURB INLETS & PAVEMENT CALLOUTS ARE TO FACE OF CURB OR EDGE OF PMT UNLESS NOTED OTHERWISE.
 - REFER TO CROSS STREET PLAN AND PROFILE SHEETS FOR SIDE STREET DRAINAGE AND PAVING INFORMATION.
 - REFER TO DEMOLITION PLAN, (SHEET NO. 173-183) FOR STORM REMOVAL LIMITS IN ACCORDANCE WITH COM STD SPEC SECTION 02221, AND PAVEMENT REMOVAL LIMITS.

- LEGEND**
- DRIVEWAY NUMBER (SEE DRIVEWAY TABLE SHEET FOR MORE INFORMATION)
 - PROP LIMITS OF ASPHALT TRANSITION PAVEMENT

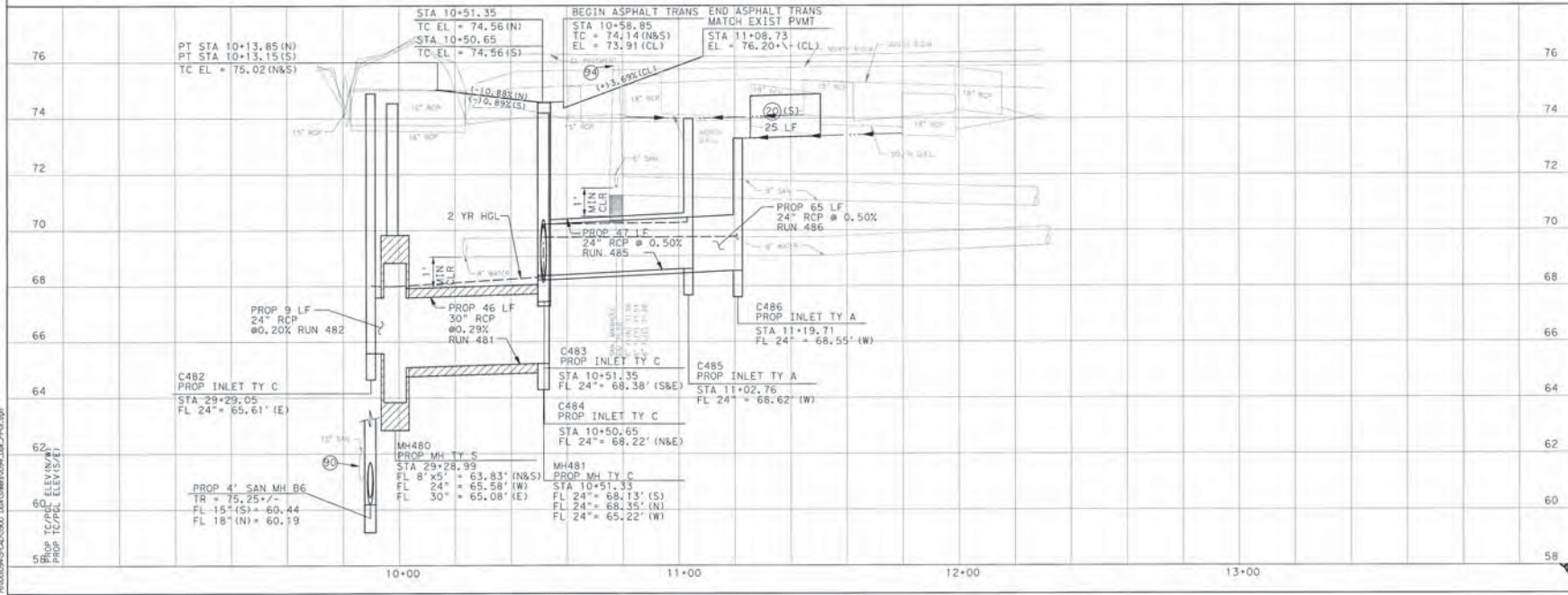
TBM: PNT. NO. 27
 SET 3/8" IR W/CAP
 STA 29+29.23, 25.11' LT BRINKMAN ST.
 ELEV. = 75.47

PROJECT BENCHMARK DATA:
 CITY OF HOUSTON MONUMENT NO. 5260-8208,
 A TYPE 44 MARK LOCATED ON THE
 NORTHEAST CORNER OF ALBA ROAD AND
 SUE BARNETT DRIVE. ELEVATION = 74.48'
 (NAVD83/CONS. 2011 ADJ.)

TO ARRANGE FOR LINES TO BE TURNED OFF OR
 MOVED, CALL CENTERPOINT AT 713-207-2222.

PRIVATE UTILITY LINES SHOWN
 AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET P.O.W. OR
 EASEMENTS CALL THE ONE STOP NOTIFICATION 713-223-4567.

- NOTES**
- REGRADE DITCH TO DRAIN WHERE EXISTING DITCH IS DISTURBED BY PROPOSED STRUCTURES.
 - ALL EXIST YARD DRAIN TO REMAIN, ADJUST TO DRAIN TO REGRADED DITCH FL (AT NO SEPARATE PAY)



DATE: 10/1/15
 DATE: 10/1/15

APPROVED FOR AT&T TELECOM/INTRODUCING CONDUIT
 FACILITIES ONLY.
 SIGNATURE VALID FOR ONE YEAR

DATE: 10/1/15

APPROVED FOR UNDERGROUND ELECTRICAL FACILITIES
 VERIFICATION ONLY.
 THIS SIGNATURE VERIFIES EXISTING UNDERGROUND FACILITIES
 NOT TO BE USED FOR CONFLICT VERIFICATION.
 SIGNATURE VALID FOR SIX MONTHS.



SURVEYED BY: LANGTECH
 PR. NO. 14-031A

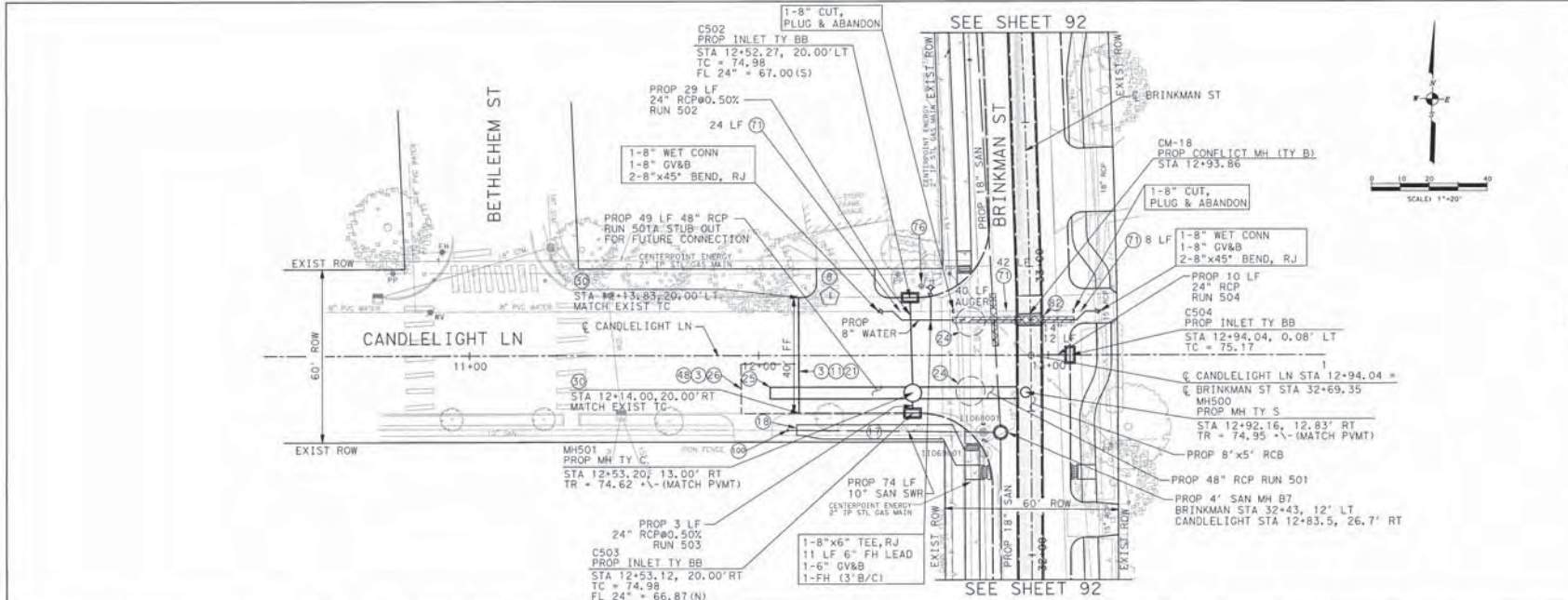
CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND
 SHEPHERD PARK (CENTRAL)
 DRAINAGE AND PAVING

OAK ST
 PLAN & PROFILE

WBS NUMBER	M-000285-0001-4
DRAWING SCALE	HORIZ. 1"=20' VERT. 1"=2'
CITY OF HOUSTON PM	JEFFREY T. HALL, P. E.
SHEET NO. 122 OF 385	

DATE: 9/23/2015 8:44:17 PM
 P:\0000045\040000\DOMS\overhead\Oak_Plan.dwg



- NOTES:**
- FOR HORIZONTAL ALIGNMENT DATA, SEE GEOMETRIC DATA SUMMARY. (SHEET NO. 5-9).
 - CURB INLETS & PAVEMENT CALLOUTS ARE TO FACE OF CURB OR EDGE OF PAVT UNLESS NOTED OTHERWISE.
 - REFER TO CROSS STREET PLAN AND PROFILE SHEETS FOR SIDESTREET DRAINAGE AND PAVING INFORMATION.
 - REFER TO DEMOLITION PLAN, (SHEET NO. 173-183) FOR STORM REMOVAL LIMITS IN ACCORDANCE WITH COH STD SPEC SECTION 02221. AND PAVEMENT REMOVAL LIMITS.

- LEGEND**
- DRIVEWAY NUMBER (SEE DRIVEWAY TABLE FOR MORE INFORMATION)
 - PROF LIMITS OF ASPHALT TRANSITION PAVEMENT

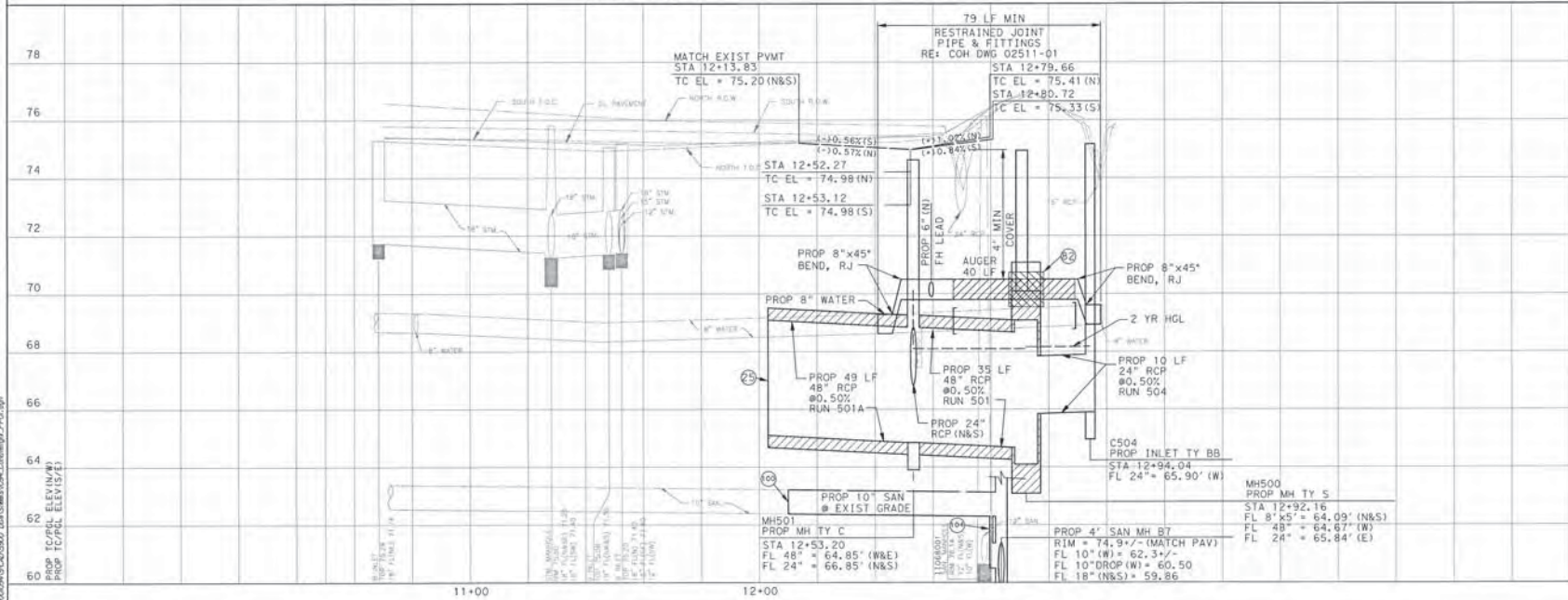
TBM PNT. NO. 28
 SET COTTON SPINDLE
 STA 32+71.82, 18'-63" LT BRINKMAN ST.
 STA 10+18.59, 21.74' LT CANDLELIGHT LN.
 ELEV. = 76.09

PROJECT BENCHMARK DATA:
 CITY OF HOUSTON MONUMENT NO. 5260-8208,
 A TYPE AA MARK LOCATED ON THE
 NORTHEAST CORNER OF ALBA ROAD AND
 SUE BARNETT DRIVE. ELEVATION = 74.48'
 (NAVDS/CORS 2011 ADJ.).

TO ARRANGE FOR LINES TO BE TURNED OFF OR
 MOVED, CALL CENTERPOINT AT 713-207-2222.

PRIVATE UTILITY LINES SHOWN
 AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET B.O.S.R. OR
 LANDMETS CALL THE LINE STAR NOTIFICATION 713-223-0464.

[Signature] DATE: 10-28-18



APPROVED FOR BEST TEXAS/SHET UNDERGROUND CONDUIT
 FACILITIES ONLY
 SIGNATURE VALID FOR ONE YEAR
[Signature] DATE: 10-28-18

CENTERPOINT ENERGY/UNDERGROUND ELECTRICAL FACILITIES
 VERIFICATION ONLY.
 THIS SIGNATURE VERIFIES EXISTING UNDERGROUND FACILITIES
 NOT TO BE USED FOR CONFLICT VERIFICATION.
 SIGNATURE VALID FOR SIX MONTHS.

SDPS
 Houston Storm Drainage
 Program Support

PGAL
 3131 BRAYPARK, SUITE 200
 HOUSTON, TEXAS 77042
 Phone (713) 962-1444
 Fax (713) 964-9333

SUPERVED BY: LINDSEY P. BOSTE

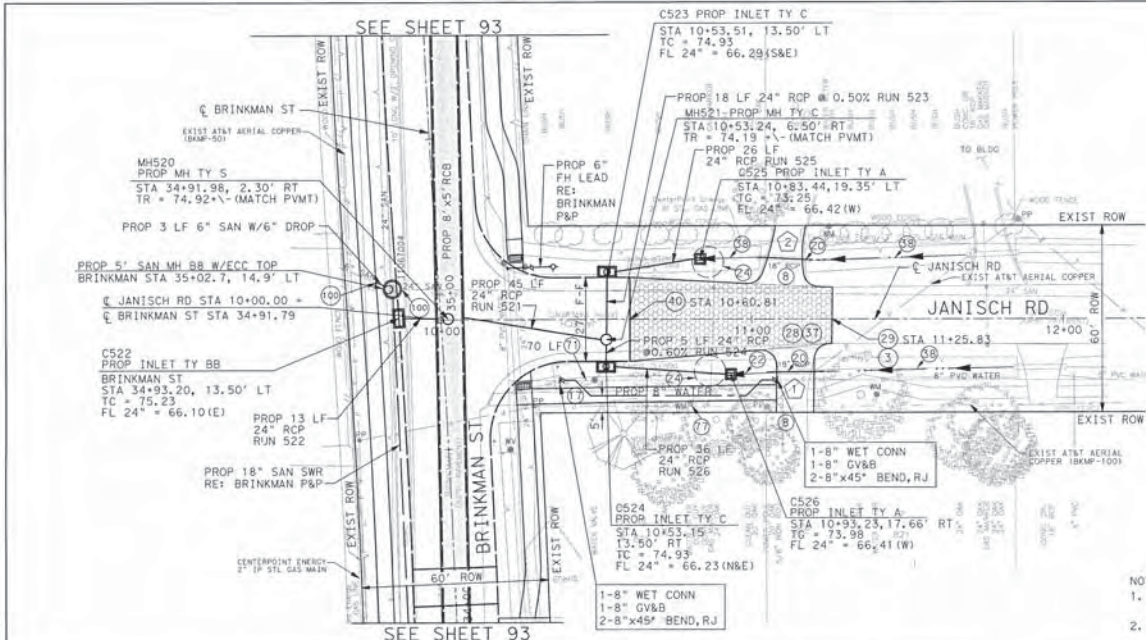
CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND
 SHEPHERD PARK (CENTRAL)
 DRAINAGE AND PAVING

CANDLELIGHT ST
 PLAN & PROFILE

WBS NUMBER	M-000285-0001-4
DRAWING SCALE	HORIZ. 1"=20' VERT. 1"=2'
CITY OF HOUSTON PM	JEFFREY T. HALL, P.E.
SHEET NO. 123 OF 385	

DATE: 10/28/18
 DRAWING: 11/20/18
 PROJECT: 11/20/18



- NOTES:**
- FOR HORIZONTAL ALIGNMENT DATA, SEE GEOMETRIC DATA SUMMARY. (SHEET NO. 5-9).
 - CURB INLETS & PAVEMENT CALLOUTS ARE TO FACE OF CURB OR EDGE OF PAVT UNLESS NOTED OTHERWISE.
 - REFER TO CROSS STREET PLAN AND PROFILE SHEETS FOR SIDEWALK DRAINAGE AND PAVING INFORMATION.
 - REFER TO DEMOLITION PLAN, (SHEET NO. 173-183) FOR STORM REMOVAL LIMITS IN ACCORDANCE WITH COH STD SPEC SECTION 02221. AND PAVEMENT REMOVAL LIMITS.

- LEGEND**
- DRIVEWAY NUMBER (SEE DRIVEWAY TABLE SHEET FOR MORE INFORMATION)
 - PROF LIMITS OF ASPHALT TRANSITION PAVEMENT

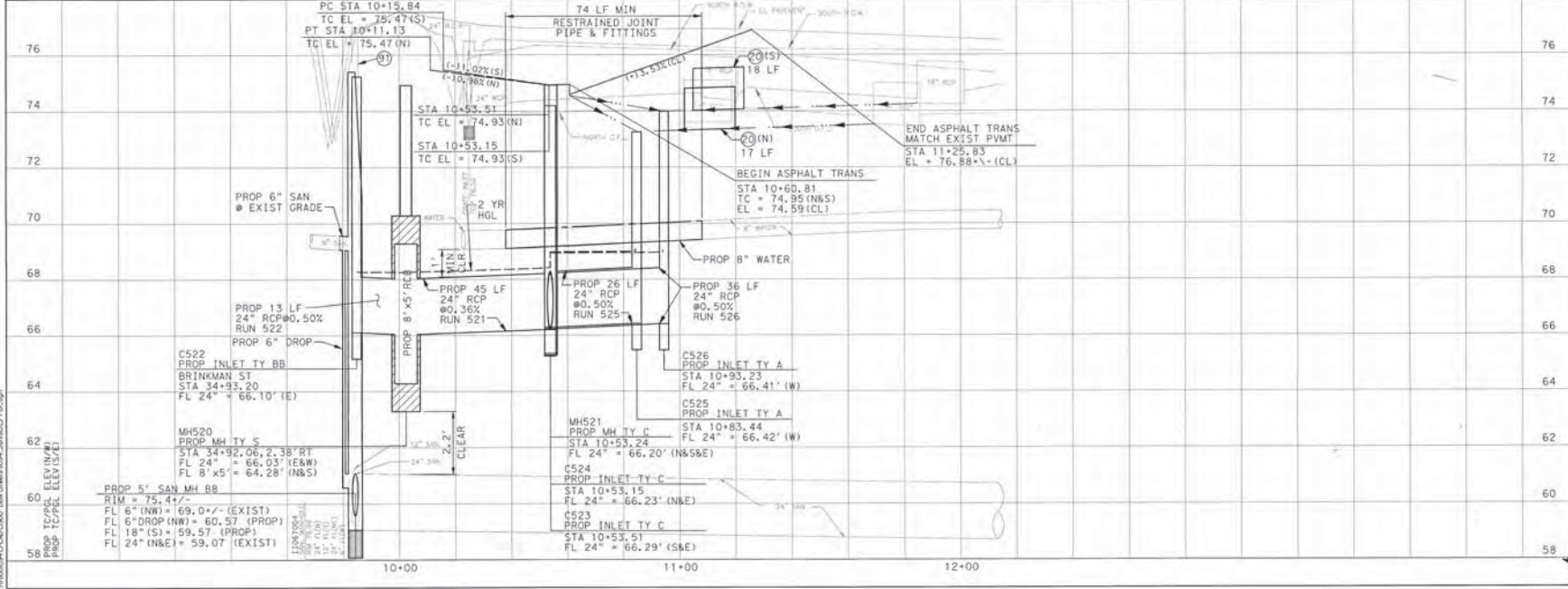
TBM1 PNT. NO. 29
SET COTTON SPINDLE
STA 35+95.45, 14.47' RT BRINKMAN ST.
STA 10+13.57, 14.44' LT JANISCH RD.
ELEV. = 76.98

PROJECT BENCHMARK DATA:
CITY OF HOUSTON MONUMENT NO. 5260-8208,
A TYPE AA MARK LOCATED ON THE
NORTHEAST CORNER OF ALBA ROAD AND
SUE BARNETT DRIVE. ELEVATION = 74.48'
(NAD83/CORS 2011 ADJ.)

TO ARRANGE FOR LINES TO BE TURNED OFF OR
MOVED, CALL CENTERPOINT AT 713-207-2222.

PRIVATE UTILITY LINES SHOWN
AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.W. OR
LAWNSIDE CALL THE ONE-CALL NOTIFICATION 713-323-4547.

- NOTES**
- REGRADE DITCH TO DRAIN WHERE EXISTING DITCH IS DISTURBED BY PROPOSED STRUCTURES.
 - ALL EXIST YARD DRAIN TO REMAIN, ADJUST TO DRAIN TO REGRADED DITCH FL (AT NO SEPARATE PAY)



DATE: 10/15
DATE: 10/15

APPROVED FOR AT&T (TEXAS) UNDERGROUND CONDUIT FACILITIES ONLY
SIGNATURE VALID FOR ONE YEAR

DATE: 10/15
DATE: 10/15

APPROVED FOR AT&T (TEXAS) UNDERGROUND ELECTRICAL FACILITIES VERIFICATION ONLY.
THIS SIGNATURE VERIFIES THAT YOU HAVE SHOWN CMP NATURAL GAS LINES CORRECTLY AND TO BE USED FOR CONFLICT VERIFICATION. (GAS SERVICE LINES ARE NOT SHOWN.)
SIGNATURE VALID FOR SIX MONTHS.



CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

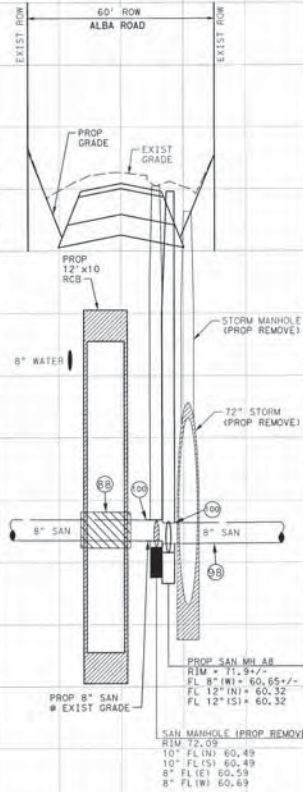
JANISCH RD PLAN & PROFILE

WBS NUMBER	M-000285-0001-4
DRAWING SCALE	HORIZ. 1"=20' VERT. 1"=2'
CITY OF HOUSTON PM	JEFFREY T. HALL, P.E.
SHEET NO.	124 OF 385

DATE: 9/20/2025 7:04:46 AM
\\MS02015\ADMIN\0001_DWG\385\1000\JANISCH_PWD.dwg

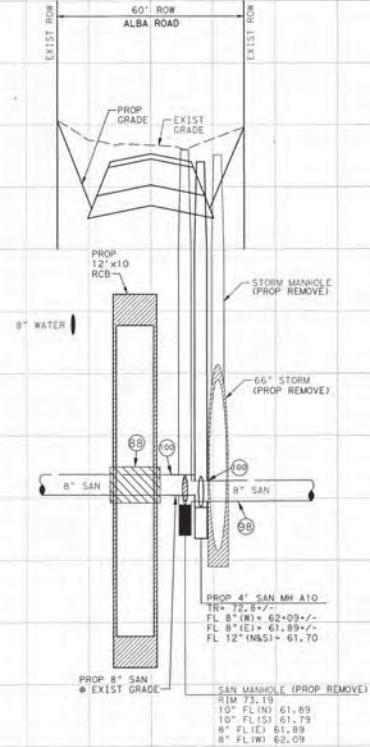
DATE: 9/20/2015 7:04:48 AM
 \\VA000045\200\0000_000\Drawings\094\Utility Profile_Sdwat.dwg

100 80 60 40 20 0 20 40 60 80 100
 LT RT



PROFILE - ALBA STA 30+00 (LOOKING NORTH)

100 80 60 40 20 0 20 40 60 80 100
 LT RT



PROFILE - ALBA STA 35+55 (LOOKING NORTH)

PROJECT BENCHMARK DATA:
 CITY OF HOUSTON MONUMENT NO. 5260-8208,
 A TYPE 4A MARK LOCATED ON THE
 NORTHEAST CORNER OF ALBA ROAD AND
 SUE BARNETT DRIVE. ELEVATION = 74.48'
 (NAVD88/CORS 2011 ADJ.)

TO ARRANGE FOR LINES TO BE TURNED OFF OR
 MOVED, CALL CENTERPOINT AT 713-207-2222.

PRIVATE UTILITY LINES SHOWN
 AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.W. OR
 EASEMENTS CALL THE LONG STAR NOTIFICATION 713-223-4641.

DATE: N/A
 CENTERPOINT ENERGY/NATURAL GAS FACILITIES VERIFICATION ONLY.
 THESE SIGNATURE VERIFIES THAT YOU HAVE SHOWN OFF NATURAL
 GAS LINES CORRECTLY-PAGE TO BE USED FOR CONFLICT
 VERIFICATION. (GAS SERVICE LINES ARE NOT SHOWN.)
 SIGNATURE VALID FOR SIX MONTHS.

DATE: N/A
 APPROVED FOR AT&T TEXAS/UNIT UNDERGROUND CONDUIT
 FACILITIES ONLY
 SIGNATURE VALID FOR ONE YEAR

DATE: N/A
 CENTERPOINT ENERGY/UNDERGROUND ELECTRICAL FACILITIES
 VERIFICATION ONLY.
 THESE SIGNATURE VERIFIES EXISTING UNDERGROUND FACILITIES-
 NOT TO BE USED FOR CONFLICT VERIFICATION.
 SIGNATURE VALID FOR SIX MONTHS.



SURVEYED BY: LANGTECH
 FB NO. 8-9576

CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND
 SHEPHERD PARK (CENTRAL)
 DRAINAGE AND PAVING

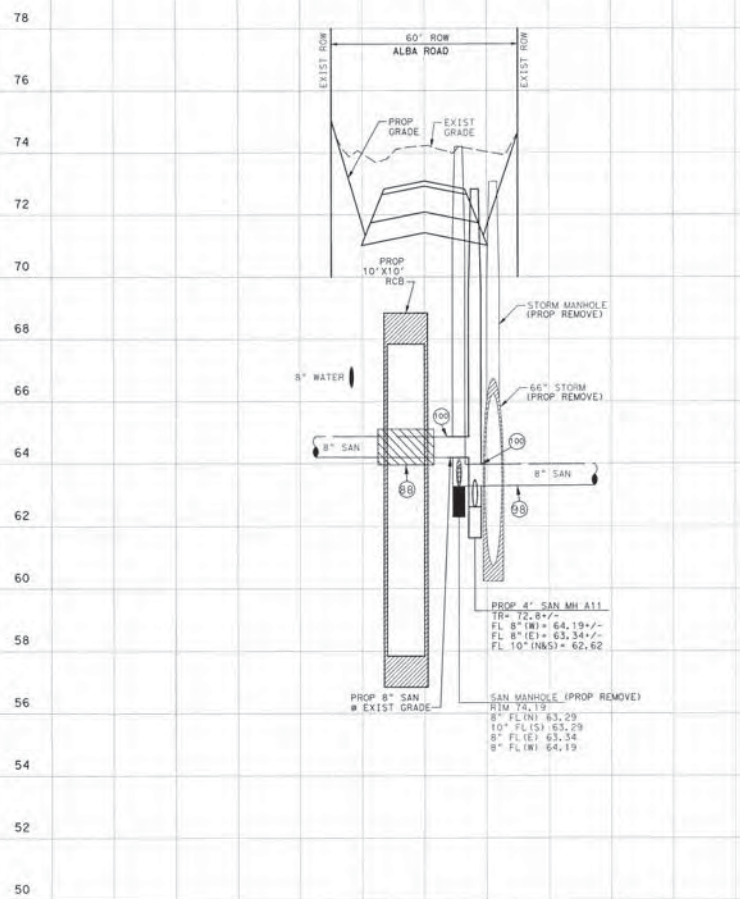
UTILITY
 PROFILES
 SHEET 2 OF 5

WBS NUMBER
 M-000285-0001-4
 DRAWING SCALE
 HORIZ. 1"=20' VERT. 1"=2'
 CITY OF HOUSTON PM
 JEFFREY T. HALL, P.E.
 SHEET NO. 126 OF 385

55630

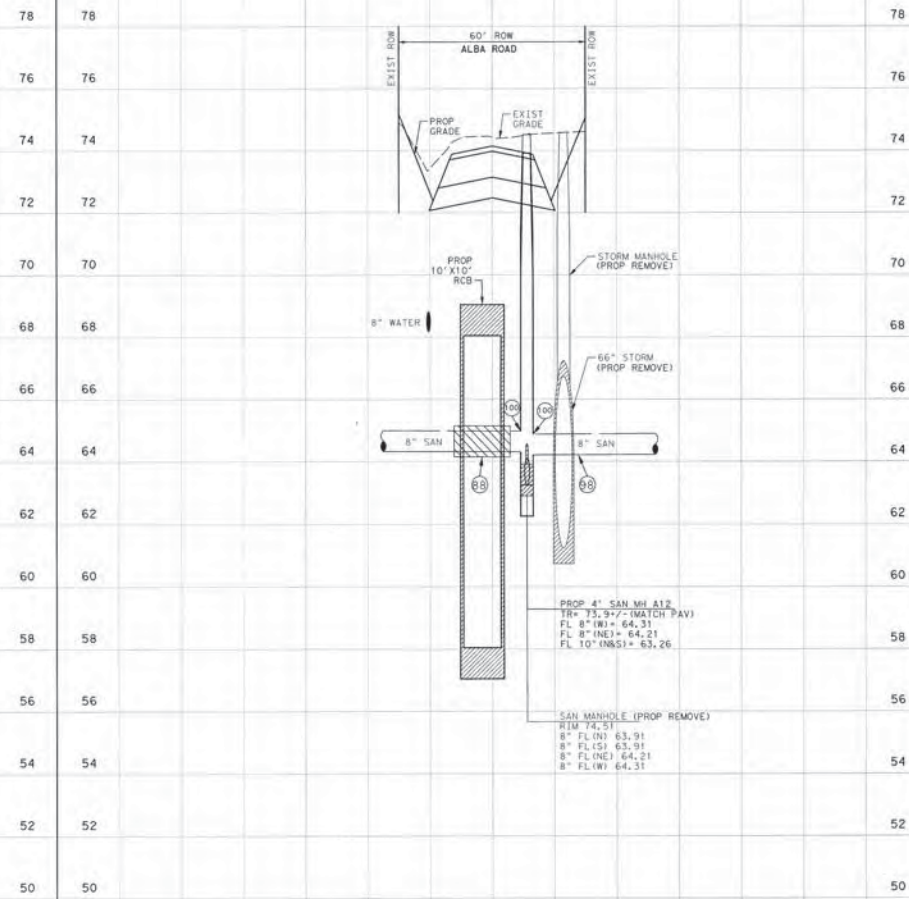
DATE: 9/30/2005 7:04:48 AM
 \\A000095\c\00000_000\over\000\Utility_Profile_Sheet.dwg

100 80 60 40 20 0 20 40 60 80 100
 LT RT



PROFILE - ALBA STA 39+25 (LOOKING NORTH)

100 80 60 40 20 0 20 40 60 80 100
 LT RT



PROFILE - ALBA STA 41+80 (LOOKING NORTH)

PROJECT BENCHMARK DATA:
 CITY OF HOUSTON MONUMENT NO. 5260-8208,
 A TYPE 4A MARK LOCATED ON THE
 NORTHEAST CORNER OF ALBA ROAD AND
 SUE BARNETT DRIVE. ELEVATION = 74.48'
 (NAVD88/CORS 2011 ADJ.1)

TO ARRANGE FOR LINES TO BE TURNED OFF OR
 MOVED, CALL CENTERPOINT AT 713-207-2222.

PRIVATE UTILITY LINES SHOWN
 AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.W. OR
 EASEMENTS CALL THE LONG STAR NOTIFICATION 713-223-1661.

N/A DATE:
 CENTERPOINT ENERGY/NATURAL GAS FACILITIES VERIFICATION ONLY.
 (THIS SIGNATURE VERIFIES THAT YOU HAVE SHOWN OFF NATURAL
 GAS LINES CORRECTLY AND TO BE USED FOR CONFLICT VERIFICATION.) (GAS SERVICE LINES ARE NOT SHOWN.)
 SIGNATURE VALID FOR SIX MONTHS.

N/A DATE:
 APPROVED FOR AT&T TEXAS/UNT UNDERGROUND CONDUIT
 FACILITIES ONLY.
 SIGNATURE VALID FOR ONE YEAR

N/A DATE:
 CENTERPOINT ENERGY/NATURAL GAS FACILITIES VERIFICATION ONLY.
 (THIS SIGNATURE VERIFIES EXISTING UNDERGROUND FACILITIES
 NOT TO BE USED FOR CONFLICT VERIFICATION.)
 SIGNATURE VALID FOR SIX MONTHS.



SURVEYED BY: LANDTECH
 P. 0516

CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND
 SHEPHERD PARK (CENTRAL)
 DRAINAGE AND PAVING

UTILITY
 PROFILES
 SHEET 3 OF 5

WBS NUMBER
 M-000285-0001-4

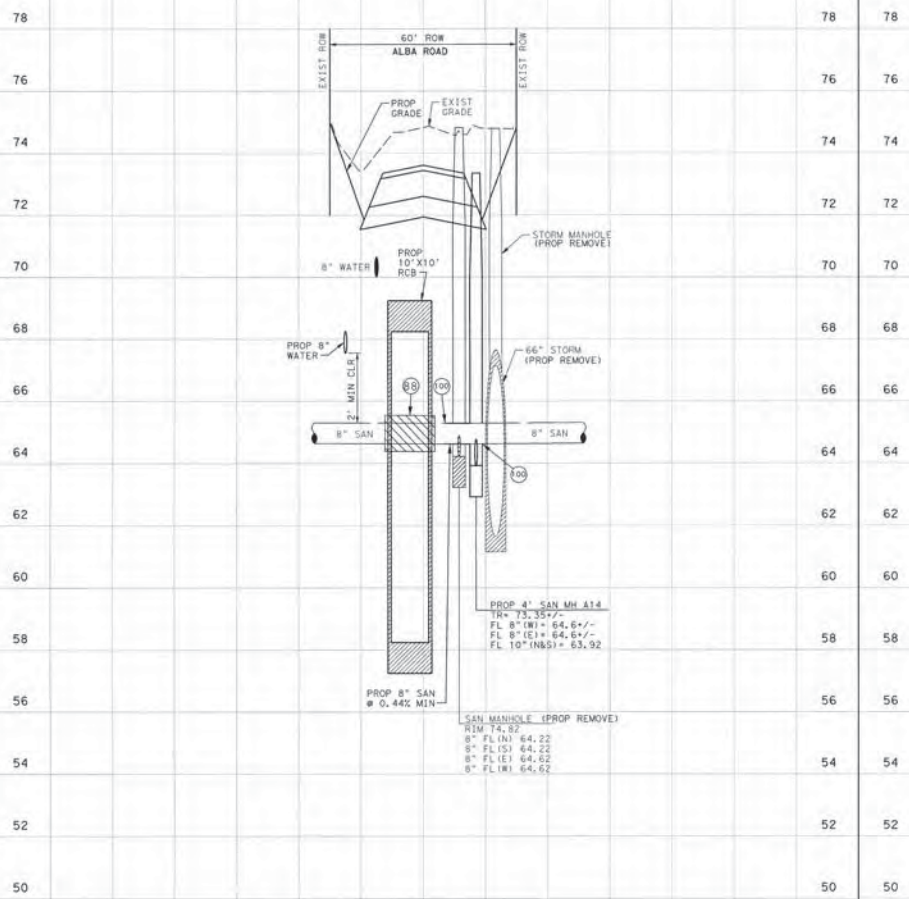
DRAWING SCALE
 HORIZ. 1"=20' VERT. 1"=2'

CITY OF HOUSTON PM
 JEFFREY T. HALL, P.E.

SHEET NO. 127 OF 385

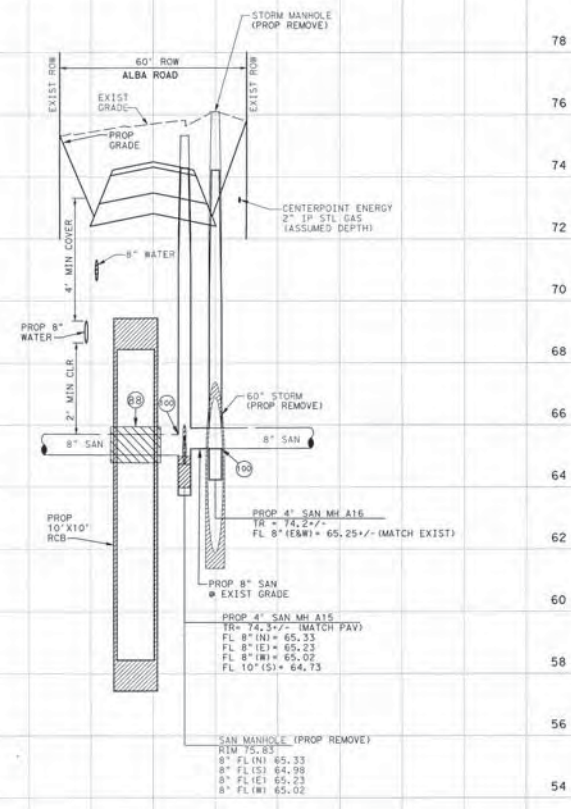
DATE: 9/20/2015 7:05:00 AM
 P:\000005\02\0000\DWG\DWG\0001\0001\Utility Profile.dwg

100 LT 80 60 40 20 0 20 40 60 80 100 RT



PROFILE - ALBA STA 44+20 (LOOKING NORTH)

100 LT 80 60 40 20 0 20 40 60 80 100 RT



PROFILE - ALBA STA 46+70 (LOOKING NORTH)

PROJECT BENCHMARK DATA:
 CITY OF HOUSTON MONUMENT NO. 5260-820B,
 A TYPE 4A MARK LOCATED ON THE
 NORTHEAST CORNER OF ALBA ROAD AND
 SUE BARNETT DRIVE. ELEVATION = 74.48'
 (NAVD83/CORS 2011 ADJ.)
 TO ARRANGE FOR LINES TO BE TURNED OFF OR
 MOVED, CALL CENTERPOINT AT 713-207-2222.

PRIVATE UTILITY LINES SHOWN
 AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET P.O.W. OR
 EASEMENTS CALL THE LONG STAR NOTIFICATION 713-223-4561.
 N/A DATE:
 CENTERPOINT ENERGY/NATURAL GAS FACILITIES VERIFICATION ONLY.
 (THIS SIGNATURE VERIFIES THAT YOU HAVE SHOWN CIP NATURAL
 GAS LINES CORRECTLY-NOT TO BE USED FOR CONFLICT VERIFICATION.)
 SIGNATURE VALID FOR SIX MONTHS.
 N/A DATE:
 APPROVES FOR AT&T TEXAS/SWBT UNDERGROUND CONDUIT
 FACILITIES ONLY.
 SIGNATURE VALID FOR ONE YEAR

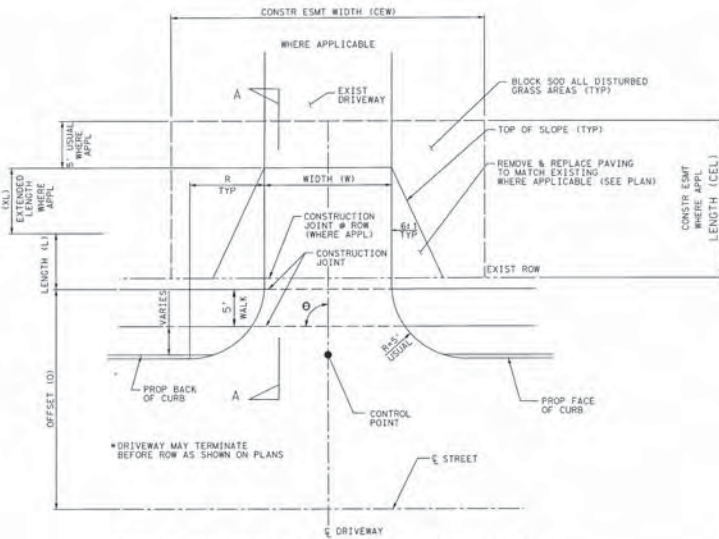


SURVEYED BY: LANDTECH
 PR NO.: P-0516
 CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

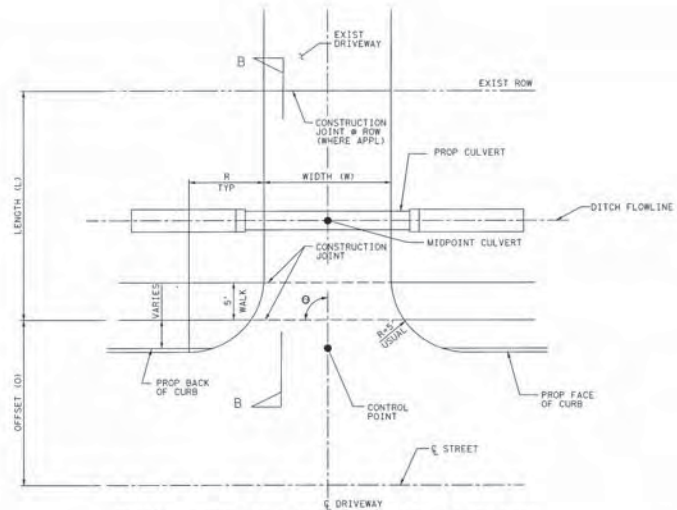
GARDEN OAKS AND
 SHEPHERD PARK (CENTRAL)
 DRAINAGE AND PAVING
 UTILITY
 PROFILES
 SHEET 4 OF 5

WBS NUMBER
 M-000285-0001-4
 DRAWING SCALE
 HORIZ. 1"=20' VERT. 1"=2'
 CITY OF HOUSTON PM
 JEFFREY T. HALL, P.E.
 SHEET NO. 128 OF 385

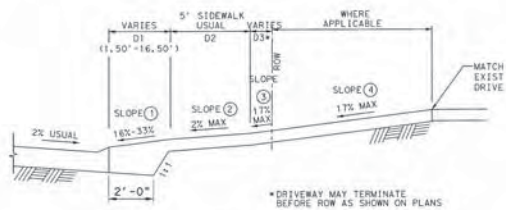




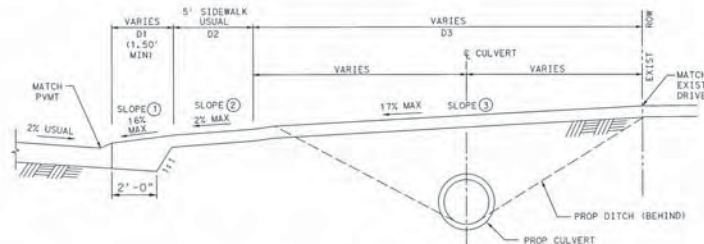
TYPICAL CONCRETE DRIVEWAY DETAIL W/O CULVERT
NTS



TYPICAL CONCRETE DRIVEWAY DETAIL W/ CULVERT
NTS



TYPICAL CONCRETE DRIVEWAY SECTION W/O CULVERT
(SECTION A-A)
NTS



TYPICAL CONCRETE DRIVEWAY SECTION W/ CULVERT
(SECTION B-B)
NTS

NOTE: REFER TO DRIVEWAY TABLE
FOR D1 AND D3 INFORMATION.



SUPPLIED BY: LANDTECH
P.O. BOX 1074
HOUSTON, TEXAS 77261

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

DRIVEWAY LAYOUT
SHEET 1 OF 2

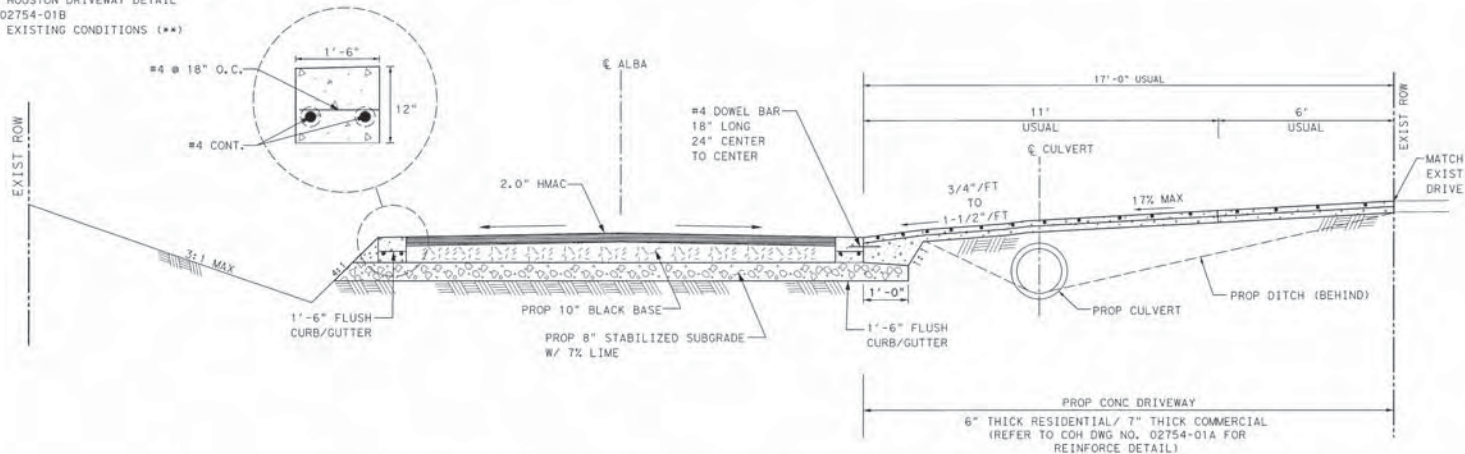
WDS NUMBER	M-000285-0001-4
DRAWING SCALE	NTS
CITY OF HOUSTON PW	JEFFREY T. HALL, P.E.
SHEET NO. 130 OF 385	



DATE: 04/27/2015 7:46:00 PM
PROJECT: 2015-04-08-0001 - DRAINAGE AND PAVING - JTH

ALBA DRIVEWAYS				DRIVEWAY WIDTH	DRIVEWAY LENGTH	DRIVEWAY AREA	CURB RETURN RADIUS		ELEV. AT GUTTER	ELEV. AT CURB/CL	ELEV. AT ROW	DELTA ELEV	OVERALL SLOPE	SLOPE S1	DISTANCE D1	ELEV. AT P1	SIDEWALK SLOPE (S2)	SIDEWALK DISTANCE (D2)	ELEV. AT P2	DISTANCE D3	SLOPE S3		
Number	Driveway Type	Alba Road STA.	OFFSET	FT	FT	SF	NORTH		SOUTH		FT	FT	FT	FT	%	FT	FT	%	FT	FT	FT	%	
							FT	FT	FT	FT													
1A	Concrete Residential	12+15.67	19.8 RT	20.7	7.50	228	5	5	71.95	72.45	72.94	1.0	13%										
1B	Concrete Residential	12+80.94	20 LT	14.0	4.79	74	5	5	71.27	71.77	71.84	0.6	12%										
1C	Concrete Residential	12+94.08	20 RT	12.0	5.21	73	5	5	71.21	71.71	72.03	0.8	16%										
1D	Concrete Residential	13+49.55	20 RT	14.6	5.19	79	2	4	70.86	71.36	71.54	0.7	13%										
1E	Concrete Residential	13+55.62	20 LT	16.0	4.81	84	5	5	70.82	71.32	71.23	0.4	9%										
1F	Concrete Commercial	13+72.16	20 RT	14.4	5.19	79	5	2	70.73	71.23	71.27	0.5	10%										
1G	Concrete Commercial	14+13.62	20 RT	30.0	5.18	162	4	4	70.48	70.98	70.82	0.3	7%										
2A	Concrete Commercial	15+86.82	16 RT	51.5	9.12	411	2	5	70.45	70.95	71.35	0.6	-	33%	1.5	70.95	2%	5	71.05	2.62	12%		
2B	Concrete Commercial	17+38.47	16 RT	45.0	9.11	383	2	2	70.70	71.20	71.41	0.6	-	33%	1.5	71.20	2%	5	71.30	2.61	4%		
2C	Concrete Commercial	18+36.04	16 RT	144.0	9.08	1226	2	2	70.40	70.90	71.33	0.6	-	33%	1.5	70.90	2%	5	71.00	2.58	13%		
2D	Concrete Commercial	17+38.34	16 LT	13.1	8.89	127	5	5	70.70	71.20	71.04	0.3	-	5%	1.5	70.78	2%	5	70.88	2.39	7%		
2J	Concrete Commercial	18+95.69	16 LT	24.0	8.93	225	5	5	70.23	70.73	70.83	0.6	-	12%	1.5	70.41	2%	5	70.51	2.43	13%		
3	Concrete Residential	20+61.94	15.6 RT	16.8	9.40	371	5	5	70.61	71.11	71.7	1.8	-	33%	1.5	71.11	2%	5	71.21	2.90	17%		
4	Concrete Residential	20+96.93	14.7 RT	15.2	10.40	258	5	5	70.83	71.33	71.94	1.1	-	33%	1.5	71.33	2%	5	71.43	3.90	13%		
5	Concrete Commercial	21+37.66	13.6 LT	28.1	21.43	618	5	5	71.09	71.59	71.7	0.6	-	3%	14.4	71.52	2%	5	71.62	2.03	4%		
6	Concrete Residential	21+46.77	13.3 RT	16.2	11.71	200	5	5	71.15	71.65	72.25	1.1	-	16%	1.5	71.39	2%	5	71.49	5.21	15%		
7	Concrete Residential	22+01.80	11.8 RT	16.1	13.17	222	5	5	71.24	71.74	71.91	0.7	-	9%	5.7	71.75	2%	5	71.85	2.47	2%		
8	Concrete Residential	22+87.32	13 RT	16.6	16.91	292	5	5	71.0	71.25	71.48	0.5	3%										
9	Concrete Residential	23+57.64	13 LT	20.4	17.12	360	5	5	70.8	71.04	71.91	1.1	7%										
10	Concrete Residential	25+98.18	13 RT	12.0	16.92	214	5	5	70.9	71.19	71.91	1.0	6%										
11	Concrete Residential	26+42.68	13 RT	14.3	16.92	253	5	5	71.1	71.36	72.4	1.3	8%										
12	Concrete Residential	26+47.92	13 LT	18.1	17.08	319	5	5	71.1	71.38	72.61	1.5	9%										
13	Concrete Residential	26+83.35	13 RT	20.6	16.91	359	5	5	71.3	71.51	73.24	2.0	12%										
14	Concrete Residential	29+88.66	13 RT	12.0	16.97	214	5	5	71.8	72.10	73.48	1.6	10%										
15	Concrete Residential	30+52.75	13 RT	12.0	16.97	214	5	5	72.3	72.55	73.35	1.1	6%										
16	Concrete Residential	30+73.79	13 LT	13.7	17.03	243	5	5	72.4	72.70	73.7	1.3	7%										
17	Concrete Residential	31+39.53	13 LT	12.0	17.02	215	5	5	72.9	73.16	73.92	1.0	6%										
18	Concrete Residential	31+37.96	13 RT	12.0	16.98	215	5	5	72.9	73.15	73.42	0.5	3%										
19	Concrete Residential	31+66.13	13 LT	12.0	17.00	214	5	5	72.9	73.12	73.82	1.0	6%										
20	Concrete Residential	31+98.57	13 RT	12.0	17.00	215	5	5	72.8	73.03	73.66	0.9	5%										

- NOTES:
1. REFER TO DRIVEWAY LAYOUT DETAILS (SHEET 130-131).
2. REFER TO CITY OF HOUSTON DRIVEWAY DETAIL STANDARD DWG NO: 02754-01B
3. DRIVEWAY MATCHES EXISTING CONDITIONS (**)



TYPICAL CONCRETE DRIVEWAY SECTION CONNECTION WITH 1'-6" FLUSH CURB/GUTTER DETAIL

NTS

SDPS
Houston Storm Drainage Program Support

PGAL
Professional Geotechnical Engineers & Surveyors
3131 BRIDGEMAN, SUITE 200
HOUSTON, TEXAS 77042
PHONE (713) 622-1444
FAX (713) 958-9333

SURVEYED BY: LANDTECH
FIB NO. P-5516

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

DRIVEWAY TABLE
SHEET 1 OF 9

WBS NUMBER
M-000285-0001-4
DRAWING SCALE
NTS
5680
CITY OF HOUSTON PM
JEFFREY T. HALL, P.E.
SHEET NO. 132 OF 385

ALBA DRIVEWAYS				DRIVEWAY WIDTH	DRIVEWAY LENGTH	DRIVEWAY AREA	CURB RETURN RADIUS		ELEV AT GUTTER	ELEV AT CURB/CL	ELEV AT ROW	DELTA ELEV	OVERALL SLOPE	SLOPE S1	DISTANCE D1	ELEV AT P1	SIDEWALK SLOPE (S2)	SIDEWALK DISTANCE (D2)	ELEV AT P2	DISTANCE D3	SLOPE S3		
Number	Driveway Type	Alba Road STA.	OFFSET	FT	FT	SF	CURB RETURN RADIUS		FT	FT	FT	FT	%	%	FT	FT	%	FT	FT	FT	FT	%	
							NORTH	SOUTH															
21	Concrete Residential	32+44.01	13 RT	15.9	17.00	282	5	5	72.6	72.89	74.74	2.1	12%									NO SIDEWALK	
22	Concrete Residential	32+65.83	13 LT	20.0	17.00	350	5	5	72.6	72.82	73.76	1.2	7%									NO SIDEWALK	
23	Concrete Residential	34+80.03	13 RT	17.6	17.00	310	5	5	72.5	72.80	74.24	1.7	10%									NO SIDEWALK	
24	Concrete Residential	35+38.61	13 LT	12.9	17.00	230	5	5	72.7	73.00	74	1.3	7%									NO SIDEWALK	
25	Concrete Residential	35+65.86	13 LT	12.0	17.00	214	5	5	72.8	73.09	74.23	1.4	8%									NO SIDEWALK	
26	Concrete Residential	35+85.77	13 RT	20.4	17.02	357	5	5	72.9	73.16	74.25	1.4	8%									NO SIDEWALK	
27	Concrete Residential	38+92.44	13 RT	12.0	17.01	215	5	5	72.6	72.83	73.5	0.9	5%									NO SIDEWALK	
28	Concrete Residential	39+39.89	13 RT	12.0	17.01	215	5	5	72.9	73.14	75.22	2.3	14%									NO SIDEWALK	
29	Concrete Residential	39+78.69	13 LT	16.0	16.98	282	5	5	73.1	73.39	75.42	2.3	13%									NO SIDEWALK	
30	Concrete Residential	40+44.83	13 LT	12.0	16.99	215	5	5	73.6	73.82	74.8	1.2	7%									NO SIDEWALK	
31	Concrete Residential	41+05.54	13 LT	12.0	16.99	215	5	5	74.0	74.21	74.8	0.8	5%									NO SIDEWALK	
32	Concrete Residential	41+65.97	13 LT	12.0	17.00	215	5	5	73.9	74.20	74.8	0.9	5%									NO SIDEWALK	
33	Concrete Residential	42+32.28	13 RT	12.0	17.00	215	5	5	73.7	73.96	74.85	1.2	7%									NO SIDEWALK	
33A	Concrete Residential	42+15.02	29 RT	20.0	20.26	435	5	5	73.8	74.02	75.17	1.4	7%									NO SIDEWALK	
34	Concrete Residential	45+44.70	13 LT	23.6	17.01	413	5	5	74.3	74.56	75.88	1.6	9%									NO SIDEWALK	
35	Concrete Residential	45+48.31	13 RT	17.9	17.00	315	5	5	74.3	74.58	76.3	2.0	12%									NO SIDEWALK	
36	Concrete Residential	47+49.03	13.5 RT	19.9	16.15	345	5	5	75.5	75.98	76.5	1.0	6%									NO SIDEWALK	

- NOTES:
1. REFER TO DRIVEWAY LAYOUT DETAILS (SHEET 130-131).
2. REFER TO CITY OF HOUSTON DRIVEWAY DETAIL STANDARD DWG NO:02754-01B
3. DRIVEWAY MATCHES EXISTING CONDITIONS (**)

DATE: 04/20/2015 7:46:13 PM
P:\020205\2002050001_0001\DWG\020501.dwg,7,table.dgn





3131 BRANFARK, SUITE 200
Houston, Texas 77042
Phone (713) 652-1444
Fax (713) 950-9333

SUPPLIED BY: LANDTECH
P-1536

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

DRIVEWAY TABLE
SHEET 2 OF 9

WBS NUMBER
M-000285-0001-4

DRAWING SCALE
AS SHOWN

DATE
5/5/10

CITY OF HOUSTON PM
JEFFREY T. HALL, P.E.
SHEET NO. 133 OF 385

CHAMBOARD DRIVEWAYS				DRIVEWAY WIDTH	DRIVEWAY LENGTH	DRIVEWAY AREA	CURB RETURN RADIUS		ELEV. AT GUTTER	ELEV. AT CURB	ELEV. AT ROW	DELTA ELEV	OVERALL SLOPE	SLOPE S1	DISTANCE D1	ELEV. AT P1	SIDEWALK SLOPE (S2)	SIDEWALK DISTANCE (D2)	ELEV. AT P2	DISTANCE D3	SLOPE S3
Number	Driveway Type	Chamboard Lane STA.	OFFSET	FT	FT	SF	EAST		FT	FT	FT	FT	%	%	FT	FT	%	FT	FT	FT	%
							FT	FT													
1A	Concrete Residential	10+42.21	13.5 LT	12.0	16.50	197	5	5	74.79	75.29	75.76	1.0	-	7.5%	4.4	75.12	2%	5.0	75.22	7.10	8%
1	Concrete Residential	11+21.88	13.5 LT	20.0	16.50	346	6	6	74.75	75.25	75.86	1.1	-	9.8%	6	75.34	2%	5.0	75.44	5.50	8%
2	Concrete Residential	11+82.17	13.5 LT	12.0	16.50	209	5	5	74.66	75.16	75.72	1.1	-	9.0%	10.5	75.61	2%	5.0	75.71	1.00	2%
3	Concrete Residential	12+19.93	13.5 RT	16.6	16.50	285	5	5	74.53	75.03	75.67	1.1	-	7.5%	6	74.98	2%	5.0	75.08	5.50	11%
4	Concrete Residential	12+39.54	13.5 LT	12.0	16.50	204	5	2	74.45	74.95	75.57	1.1	-	9.0%	6	74.99	2%	5.0	75.09	5.50	9%
5	Concrete Residential	12+63.39	13.5 LT	17.2	16.50	287	2	6	74.37	74.87	75.31	0.9	-	9.0%	6	74.91	2%	5.0	75.01	5.50	5%
6	Concrete Residential	12+78.82	13.5 RT	12.0	16.50	200	5	5	74.32	74.82	75.43	1.1	-	7.5%	6	74.77	2%	5.0	74.87	5.50	10%
7	Concrete Residential	13+22.20	13.5 LT	12.0	16.50	201	5	5	74.17	74.67	75.06	0.9	-	8.0%	6	74.65	2%	5.0	74.75	5.50	6%
8	Concrete Residential	13+49.78	13.5 RT	12.0	16.50	199	5	5	74.07	74.57	75.19	1.1	-	8.8%	6	74.60	2%	5.0	74.70	5.50	9%
9	Concrete Residential	13+93.05	13.5 LT	12.0	16.50	202	5	5	73.92	74.42	75.05	1.1	-	12.0%	6	74.64	2%	5.0	74.74	5.50	6%
10	Concrete Residential	14+28.04	13.5 RT	19.4	16.50	325	5	5	73.80	74.30	75.35	1.6	-	12.5%	6	74.55	2%	5.0	74.65	5.50	13%
10A	Concrete Residential	14+97.80	13.5 RT	17.9	16.50	306	5	5	73.55	74.05	75.19	1.6	-	12.5%	6	74.30	2%	5.0	74.40	5.50	14%
11	Concrete Residential	14+63.76	13.5 LT	12.0	16.50	200	5	5	73.67	74.17	75.05	1.4	-	12.0%	6	74.39	2%	5.0	74.49	5.50	10%
12	Concrete Residential	15+45.04	13.5 RT	12.0	16.50	209	5	5	73.39	73.89	74.85	1.5	-	12.5%	6	74.14	2%	5.0	74.24	5.50	11%
13	Concrete Residential	16+76.22	13.5 RT	19.6	16.50	336	5	5	73.24	73.74	74.39	1.2	-	9.0%	6	73.78	2%	5.0	73.88	5.50	9%
14	Concrete Residential	17+56.46	13.5 LT	16.9	16.50	296	6	6	73.53	74.03	74.92	1.4	-	11.0%	6	74.19	2%	5.0	74.29	5.50	11%
15	Concrete Residential	17+71.74	13.5 RT	28.1	16.50	474	5	5	73.58	74.08	74.82	1.2	-	9.0%	6	74.12	2%	5.0	74.22	5.50	11%
16	Concrete Residential	18+13.70	13.5 LT	12.0	16.50	200	5	5	73.73	74.23	75.15	1.4	-	12.0%	6	74.45	2%	5.0	74.55	5.50	11%
17	Concrete Residential	18+50.42	13.5 RT	12.0	16.50	209	5	5	73.85	74.35	75.2	1.4	-	10.0%	5	74.35	2%	5.0	74.45	6.50	12%
18	Concrete Residential	18+89.52	13.5 LT	12.0	16.50	203	5	5	73.99	74.49	75.3	1.3	-	9.0%	6	74.53	2%	5.0	74.63	5.50	12%
19	Concrete Residential	19+57.29	13.5 LT	12.0	16.50	198	5	5	74.23	74.73	75.37	1.1	-	8.0%	6	74.71	2%	5.0	74.81	5.50	10%
20	Concrete Residential	19+67.67	13.5 RT	18.6	16.50	321	5	5	74.27	74.77	75.26	1.0	-	6.0%	6	74.63	2%	5.0	74.73	5.50	10%
21	Concrete Residential	20+25.42	13.5 LT	12.0	16.50	209	5	5	74.47	74.97	75.72	1.3	-	8.0%	6	74.95	2%	5.0	75.05	5.50	12%
21A	Concrete Commercial	21+37.70	13.5 RT	18.9	16.52	321	0	5	74.90	75.40	76.00	1.1	-	8.0%	6.1	75.39	2%	5.0	75.49	5.40	9%

NOTES:

1. REFER TO DRIVEWAY LAYOUT DETAILS (SHEET 130-131).
2. REFER TO CITY OF HOUSTON DRIVEWAY DETAIL STANDARD DWG NO: 02754-01B
3. DRIVEWAY MATCHES EXISTING CONDITIONS (**)

SDPS
Houston Storm Drainage
Program Support

PGAL
LANDSCAPE ARCHITECTS
3131 BRANBARK, SUITE 200
HOUSTON, TEXAS 77042
PHONE (713) 622-1444
FAX (713) 968-9333

SURVEYED BY: LANDTECH
F.B. NO.: P-5576

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL)
DRAINAGE AND PAVING

DRIVEWAY TABLE
SHEET 3 OF 9

WBS NUMBER	M-000285-0001-4
DRAWING SCALE	AS SHOWN
DATE	5/5/20
CITY OF HOUSTON PW	JEFFREY T. HALL, P.E.
SHEET NO. 134 OF 385	

BRINKMAN DRIVEWAYS				DRIVEWAY WIDTH	DRIVEWAY LENGTH	DRIVEWAY AREA	CURB RETURN RADIUS		ELEV. AT GUTTER	ELEV. AT CURB	ELEV. AT ROW	DELTA ELEV.	OVERALL SLOPE	SLOPE S1	DISTANCE D1	ELEV. AT P1	SIDEWALK SLOPE (S2)	SIDEWALK DISTANCE (D2)	ELEV. AT P2	DISTANCE D3	SLOPE S3	
Number	Driveway Type	Brinkman Street STA.	OFFSET	FT	FT	SF	CURB RETURN RADIUS		FT	FT	FT	FT	%	%	FT	FT	%	FT	FT	FT	FT	%
							NORTH	SOUTH														
1	Concrete Commercial	12+33.53	13.5 RT	20.0	16.50	341	5	5	74.99	75.49	76.82	1.8	-	12.5%	4.57	75.56	2%	5.0	75.66	6.93	17%	
2	Concrete Residential	15+64.67	13.5 RT	17.8	16.50	299	2	5	74.89	75.39	75.39	0.5	-	3.0%	8.8	75.15	2%	5.0	75.25	2.70	5%	
3	Concrete Residential	15+98.47	13.5 RT	24.1	16.50	404	5	2	75.00	75.50	75.89	0.9	-	8.0%	7	75.56	2%	5.0	75.66	4.50	5%	
3A	Concrete Residential	17+44.40	13.5 RT	25.1	16.50	383	5	5	74.48	74.98	75.45	1.0	-	7.0%	9.34	75.13	2%	5.0	75.23	2.16	10%	
4	Concrete Commercial	20+16.98	13.5 RT	17.9	16.50	306	5	5	75.12	75.62	76.18	1.1	-	10.0%	7	75.82	2%	5.0	75.92	4.50	6%	
5	Concrete Commercial	21+20.33	13.5 RT	24.8	16.50	420	5	5	75.03	75.53	76.12	1.1	-	10.0%	7	75.73	2%	5.0	75.83	4.50	6%	
6	Concrete Residential	23+09.09	13.5 RT	18.0	16.50	308	5	5	75.04	75.54	76.43	1.4	-	12.0%	6.5	75.82	2%	5.0	75.92	5.00	10%	
7	Concrete Residential	23+76.13	13.5 RT	16.9	16.50	284	2	5	75.24	75.74	75.72	0.5	-	3.0%	8.34	75.49	2%	5.0	75.59	3.16	4%	
8	Concrete Residential	24+00.50	13.5 RT	12.0	16.50	204	5	2	75.31	75.81	75.82	0.5	-	3.0%	8.34	75.56	2%	5.0	75.66	3.16	5%	
9	Concrete Commercial	24+65.07	13.5 RT	29.5	16.50	498	5	5	75.08	75.58	75.9	0.8	-	6.0%	8.34	75.58	2%	5.0	75.68	3.16	7%	
10	Concrete Commercial	25+28.92	14.9 RT	32.2	15.08	494	5	5	74.86	75.36	75.79	0.9	-	9.0%	7.41	75.53	2%	5.0	75.63	2.67	6%	
11	Concrete Residential	26+49.43	13.5 RT	18.6	16.50	318	5	5	74.87	75.37	76.24	1.4	-	12.0%	6.5	75.65	2%	5.0	75.75	5.00	10%	
12	Concrete Residential	27+46.30	13.5 RT	12.0	16.50	206	5	5	75.03	75.53	75.69	0.7	-	5.0%	9.34	75.50	2%	5.0	75.60	2.16	4%	
13	Concrete Residential	28+07.14	13.5 RT	12.0	16.50	206	5	5	74.82	75.32	75.92	1.1	-	9.0%	9.34	75.66	2%	5.0	75.76	2.16	7%	
14	Concrete Residential	28+09.37	13.5 LT	12.0	16.50	209	5	5	74.81	75.31	75.31	0.5	-	5.0%	4.5	75.04	2%	5.0	75.14	7.00	3%	
15	Concrete Residential	31+10.30	13.5 RT	12.0	16.50	202	5	5	75.03	75.53	75.57	0.5	-	4.0%	7	75.31	2%	5.0	75.41	4.50	4%	
16	Concrete Residential	32+12.09	13.5 RT	12.0	16.50	203	5	5	74.87	75.37	75.96	1.1	-	12.0%	4.21	75.38	2%	5.0	75.48	7.29	7%	
17	Concrete Residential	32+86.00	13.6 RT	12.0	16.39	204	5	5	74.76	75.26	76.07	1.3	-	12.0%	9.37	75.88	2%	5.0	75.98	2.02	4%	
18	Concrete Residential	33+29.37	13.5 RT	22.2	16.50	377	5	5	74.98	75.48	76.76	1.8	-	12.5%	1.5	75.17	2%	5.0	75.27	10.00	15%	

- NOTES:
1. REFER TO DRIVEWAY LAYOUT DETAILS (SHEET 130-131).
 2. REFER TO CITY OF HOUSTON DRIVEWAY DETAIL STANDARD DWG NO: 02754-01B
 3. DRIVEWAY MATCHES EXISTING CONDITIONS (**)





3131 BRANSON, SUITE 200
HOUSTON, TEXAS 77042
Phone (713) 622-1444
Fax (713) 968-9333



CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

DRIVEWAY TABLE
SHEET 4 OF 9

WBS NUMBER
M-000285-0001-4

DRAWING SCALE
NTS

CITY OF HOUSTON PM
JEFFREY T. HALL, P.E.
SHEET NO. 135 OF 385



WAKEFIELD DRIVEWAYS				DRIVEWAY WIDTH	DRIVEWAY LENGTH	DRIVEWAY AREA	CURB RETURN RADIUS		ELEV AT GUTTER/E DGE OF PAVT	ELEV AT CURB/CL	ELEV AT ROW	DELTA ELEV	OVERALL SLOPE	SLOPE S1	DISTANCE D1	ELEV AT P1	SIDEWALK SLOPE (S2)	SIDEWALK DISTANCE (D2)	ELEV AT P2	DISTANCE 3 D3	SLOPE 3 S3	
Number	Driveway Type	Wakefield Drive STA.	OFFSET				EAST	WEST														
			FT	FT	SF	FT	FT	FT	FT	FT	FT	%	%	FT	FT	%	FT	FT	FT	FT	%	
1	Concrete Residential	14+08.82	13 RT	15.8	16.97	279	5	5	69.93	70.19	71.08	1.15	7%									NO SIDEWALK
3	Concrete Residential	13+81.51	11.46 RT	18.3	18.54	348	5	5	70.16	70.39	70.95	0.79	4%									NO SIDEWALK
4**	Concrete Residential	13+54.62	10.72 RT	16.1	19.28	318	5	5	70.26	-	70.92	0.66	3%									NO SIDEWALK
5**	Concrete Residential	13+05.62	10.81 RT	34.3	14.19	494	5	5	70.06	-	70.13	0.07	0%									NO SIDEWALK
6**	Concrete Residential	12+74.57	10.73 RT	10.9	14.27	164	5	5	69.96	-	70.06	0.10	1%									NO SIDEWALK
7	Concrete Commercial	15+85.63	13.93 RT	42.5	11.07	486	5	0	70.50	70.78	70.95	0.45	4%									NO SIDEWALK

NOTES:

1. REFER TO DRIVEWAY LAYOUT DETAILS (SHEET 130-131).
2. REFER TO CITY OF HOUSTON DRIVEWAY DETAIL STANDARD DWG NO: 02754-01B
3. DRIVEWAY MATCHES EXISTING CONDITIONS (**)

DATE: 9/20/2015 7:54:45 PM P:\0209945\24015890_DWG\0209945\0209945_Dwg_7.tbl.dwg

SDPS
Houston Storm Drainage
Program Support

PGAL
JUNE 1952
ALC. P-2762
3131 BRANFORD, SUITE 200
HOUSTON, TEXAS 77042
PHONE (713) 852-1444
FAX (713) 958-9333

CITY OF HOUSTON
CRISTAL L. GERRARD
34255
I REVERE
CORRAL

SUPERVISED BY: LANDTECH P-25716

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

DRIVEWAY TABLE
SHEET 5 OF 9

ISS NUMBER	M-000285-0001-4
DRAWING SCALE	AS SHOWN
DTS	55630
CITY OF HOUSTON PW	JEFFREY T. HALL, P.E.
SHEET NO. 136 OF 385	

MARTIN DRIVEWAYS				DRIVEWAY WIDTH	DRIVEWAY LENGTH	DRIVEWAY AREA	CURB RETURN RADIUS		ELEV AT GUTTER	ELEV AT CURB	ELEV AT ROW	DELTA ELEV	OVERALL SLOPE	SLOPE S1	DISTANCE D1	ELEV AT P1	SIDEWALK SLOPE (S2)	SIDEWALK DISTANCE (D2)	ELEV AT P2	DISTANCE 3 D3	SLOPE 3 S3	
Number	Driveway Type	Martin Street STA.	OFFSET	FT	FT	SF	CURB RETURN RADIUS		FT	FT	FT	FT	%	%	FT	FT	%	FT	FT	FT	FT	%
							EAST	WEST														
1	Concrete Commercial	10+62.19	13.6 RT	16.6	11.40	198	4	5	74.71	75.21	75.76	1.05	9%				NO SIDEWALK					
2	Concrete Residential	10+61.53	13.4 LT	30.4	11.57	363	5	5	74.71	75.21	76.14	1.43	-	33.3%	1.5	75.21	2%	5.0	75.31	5.07	16%	
3	Concrete Residential	11+09.95	10.7 LT	12.2	14.33	183	4	4	75.60	75.81	75.96	0.36	-	2.0%	3.6	75.67	2%	5.0	75.77	10.80	2%	
4	Concrete Commercial	11+29.74	12.1 RT	20.0	12.90	266	4	4	75.92	76.30	75.92	0.00	0%				NO SIDEWALK					

OAK DRIVEWAY				DRIVEWAY WIDTH	DRIVEWAY LENGTH	DRIVEWAY AREA	CURB RETURN RADIUS		ELEV AT GUTTER/E DGE OF PVMT	ELEV AT CURB/CL	ELEV AT ROW	DELTA ELEV	OVERALL SLOPE	SLOPE S1	DISTANCE D1	ELEV AT P1	SIDEWALK SLOPE (S2)	SIDEWALK DISTANCE (D2)	ELEV AT P2	DISTANCE 3 D3	SLOPE 3 S3	
Number	Driveway Type	Oak Street STA.	OFFSET	FT	FT	SF	CURB RETURN RADIUS		FT	FT	FT	FT	%	%	FT	FT	%	FT	FT	FT	FT	%
							EAST	WEST														
1	Concrete Residential	10+87.04	11.06 LT	10.4	8.94	107	5	5	75.18	75.40	75.81	0.63	7%				NO SIDEWALK					

CANDLELIGHT DRIVEWAY				DRIVEWAY WIDTH	DRIVEWAY LENGTH	DRIVEWAY AREA	CURB RETURN RADIUS		ELEV AT GUTTER/E DGE OF PVMT	ELEV AT CURB/CL	ELEV AT ROW	DELTA ELEV	OVERALL SLOPE	SLOPE S1	DISTANCE D1	ELEV AT P1	SIDEWALK SLOPE (S2)	SIDEWALK DISTANCE (D2)	ELEV AT P2	DISTANCE 3 D3	SLOPE 3 S3	
Number	Driveway Type	Candlelight Lane STA.	OFFSET	FT	FT	SF	CURB RETURN RADIUS		FT	FT	FT	FT	%	%	FT	FT	%	FT	FT	FT	FT	%
							EAST	WEST														
1	Concrete Residential	12+30.07	19.95 LT	20.1	10.05	212	5	5	74.61	75.11	75.8	1.19	12%				NO SIDEWALK					

JANISCH DRIVEWAYS				DRIVEWAY WIDTH	DRIVEWAY LENGTH	DRIVEWAY AREA	CURB RETURN RADIUS		ELEV AT GUTTER/E DGE OF PVMT	ELEV AT CURB/CL	ELEV AT ROW	DELTA ELEV	OVERALL SLOPE	SLOPE S1	DISTANCE D1	ELEV AT P1	SIDEWALK SLOPE (S2)	SIDEWALK DISTANCE (D2)	ELEV AT P2	DISTANCE 3 D3	SLOPE 3 S3	
Number	Driveway Type	Janisch Road STA.	OFFSET	FT	FT	SF	CURB RETURN RADIUS		FT	FT	FT	FT	%	%	FT	FT	%	FT	FT	FT	FT	%
							EAST	WEST														
1	Concrete Residential	11+13.63	8.94 RT	12.0	21.10	265	5	5	76.27	76.45	76.52	0.25	1%				NO SIDEWALK					
2	Concrete Residential	11+09.90	10.96 LT	9.8	19.04	223	5	5	76.10	76.32	76.46	0.36	2%				NO SIDEWALK					

- NOTES:
1. REFER TO DRIVEWAY LAYOUT DETAILS (SHEET 130-131).
 2. REFER TO CITY OF HOUSTON DRIVEWAY DETAIL STANDARD DWG NO: 02754-01B
 3. DRIVEWAY MATCHES EXISTING CONDITIONS (**)



PGAL
 3131 BRANFARK, SUITE 200
 HOUSTON, TEXAS 77042
 PHONE (713) 852-1444
 FAX (713) 968-9333

CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

DRIVEWAY TABLE
 SHEET 8 OF 9

WBS NUMBER
 M-000285-0001-4

DRAWING SCALE
 AS SHOWN

DATE
 5/5/20

CITY OF HOUSTON PW
 JEFFREY T. HALL, P.E.
 SHEET NO. 139 OF 385

DATE: 04/20/2020 7:58:45 PM P:\000045\2020\0000_DRAIN\00045\00045.dwg, 7:58:45 PM

FISHER DRIVEWAYS				DRIVEWAY WIDTH	DRIVEWAY LENGTH	DRIVEWAY AREA	CURB RETURN RADIUS		ELEV. AT GUTTER	ELEV. AT CURB	ELEV. AT ROW	DELTA ELEV	OVERALL SLOPE	SLOPE S1	DISTANCE D1	ELEV. AT P1	SIDEWALK SLOPE (S2)	SIDEWALK DISTANCE (D2)	ELEV. AT P2	DISTANCE D3	SLOPE S3	
Number	Driveway Type	Fisher Street STA.	OFFSET	FT	FT	SF	EAST	WEST	FT	FT	FT	FT	%	%	FT	FT	%	FT	FT	FT	FT	%
							FT	FT														
1	Concrete Commercial	12+07.51	13.5 LT	21.9	11.50	257	5	5	70.63	71.13	71.38	0.8	-	10.0%	5.5	71.18	2%	5.0	71.28	1.00	10%	
2	Concrete Commercial	12+47.27	13.5 RT	11.0	11.50	133	5	2	70.68	71.18	72.01	1.3	12%	NO SIDEWALK								
3	Concrete Commercial	12+70.65	13.5 RT	21.2	11.50	253	2	5	70.82	71.32	71.45	0.6	5%	NO SIDEWALK								
4	Concrete Residential	12+73.30	13.5 LT	13.7	11.50	168	5	5	70.83	71.33	71.54	0.7	-	9.0%	5.5	71.325	2%	5.0	71.43	1.00	12%	
5	Concrete Commercial	13+65.81	13.5 LT	28.0	16.50	473	5	5	71.11	71.61	72.58	1.5	-	12.0%	2.5	71.41	2%	5.0	71.51	9.00	12%	
6	Concrete Commercial	13+63.65	13.5 RT	13.8	11.50	160	2	2	71.12	71.62	71.71	0.6	5%	NO SIDEWALK								
7	Concrete Commercial	14+02.80	13.5 RT	35.0	11.50	404	2	2	70.99	71.49	72.13	1.1	16%	NO SIDEWALK								
8	Concrete Commercial	14+35.72	13.5 LT	24.0	11.50	320	10	10	70.87	71.37	71.56	0.7	-	12.0%	2.5	71.17	2%	5.0	71.27	4.00	7%	
9	Concrete Commercial	14+79.82	13.5 LT	12.0	11.50	148	5	5	70.72	71.22	71.59	0.9	-	12.0%	3.5	71.14	2%	5.0	71.24	3.00	12%	
10	Concrete Commercial	15+05.10	13.5 RT	24.0	11.50	287	5	5	70.63	71.13	71.27	0.6	6%	NO SIDEWALK								
11	Concrete Commercial	15+22.54	13.5 LT	13.9	11.50	166	5	2	70.57	71.07	71.16	0.6	-	7.0%	4.5	70.885	2%	5.0	70.99	2.00	9%	
12	Concrete Commercial	15+42.35	13.5 LT	12.0	11.50	143	2	5	70.50	71.00	70.99	0.5	-	5.0%	3.25	70.6625	2%	5.0	70.76	3.25	7%	
13	Concrete Commercial	15+68.41	13.5 RT	19.5	11.50	236	5	5	70.41	70.91	70.92	0.5	4%	NO SIDEWALK								
14	Concrete Commercial	16+64.50	13.5 LT	26.5	16.50	480	10	10	70.07	70.57	70.77	0.7	-	5.0%	10.5	70.595	2%	5.0	70.70	1.00	8%	
15	Concrete Commercial	16+71.85	13.5 RT	24.1	11.50	293	5	5	70.04	70.54	70.13	0.1	1%	NO SIDEWALK								
16	Concrete Residential	17+82.62	13.5 LT	16.0	16.50	273	5	5	69.66	70.16	70.56	0.9	-	7.0%	10.5	70.395	2%	5.0	70.50	1.00	7%	
17	Concrete Commercial	20+08.51	13.5 RT	16.1	11.50	199	5	5	70.38	70.88	71.31	0.9	8%	NO SIDEWALK								
18	Concrete Residential	20+22.44	13.5 LT	24.0	16.30	402	5	5	70.47	70.97	71.62	1.2	-	9.0%	4	70.83	2%	5.0	70.93	7.30	9%	
19	Concrete Commercial	21+50.14	13.5 LT	28.1	11.50	423	10	10	71.30	71.80	72.45	1.2	-	33.0%	1.5	71.795	2%	5.0	71.90	5.00	11%	
20	Concrete Residential	21+51.03	13.5 RT	13.6	11.50	167	5	5	71.30	71.80	72.62	1.3	11%	NO SIDEWALK								
21	Concrete Commercial	22+08.69	13.5 RT	23.4	11.50	280	5	5	71.59	72.09	71.77	0.2	2%	NO SIDEWALK								
22	Concrete Residential	22+61.03	13.5 RT	17.2	11.50	215	5	5	71.41	71.91	72.14	0.7	6%	NO SIDEWALK								
23	Concrete Residential	22+72.53	13.5 LT	18.6	11.50	224	5	5	71.37	71.87	72.22	0.8	-	16.0%	1.5	71.61	2%	5.0	71.71	5.00	10%	
24	Concrete Residential	23+29.78	13.5 RT	11.1	11.50	145	5	5	71.17	71.67	71.95	0.8	7%	NO SIDEWALK								
25	Concrete Residential	23+56.73	13.5 LT	13.9	11.50	171	5	5	71.07	71.57	71.83	0.8	-	12.0%	1.5	71.25	2%	5.0	71.35	5.00	10%	
26	Concrete Residential	23+87.77	13.5 LT	15.0	11.50	183	5	5	70.96	71.46	72.18	1.2	-	33.0%	1.5	71.455	2%	5.0	71.555	5.00	13%	
26A	Concrete Residential	23+91.76	13.5 RT	13.1	11.50	160	5	5	70.75	71.25	72.18	1.4	12%	NO SIDEWALK								
27	Concrete Residential	24+54.14	13.5 RT	12.0	11.50	145	5	5	70.73	71.23	72.16	1.4	12%	NO SIDEWALK								
28	Concrete Residential	24+56.45	13.5 LT	12.0	11.50	170	5	5	70.72	71.22	72.13	1.4	-	33.0%	1.5	71.215	2%	5.0	71.315	5.00	16%	
29	Concrete Residential	25+21.85	13.8 LT	12.0	11.50	182	5	5	70.65	71.15	71.79	1.1	-	33.0%	1.5	71.145	2%	5.0	71.245	5.00	11%	

- NOTES:
1. REFER TO DRIVEWAY LAYOUT DETAILS (SHEET 130-131).
2. REFER TO CITY OF HOUSTON DRIVEWAY DETAIL STANDARD DWG NO: 02754-01B
3. DRIVEWAY MATCHES EXISTING CONDITIONS (**)



SUPPLIED BY: LANDTECH
P. NO. 10-1016

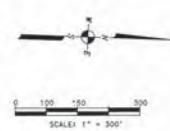
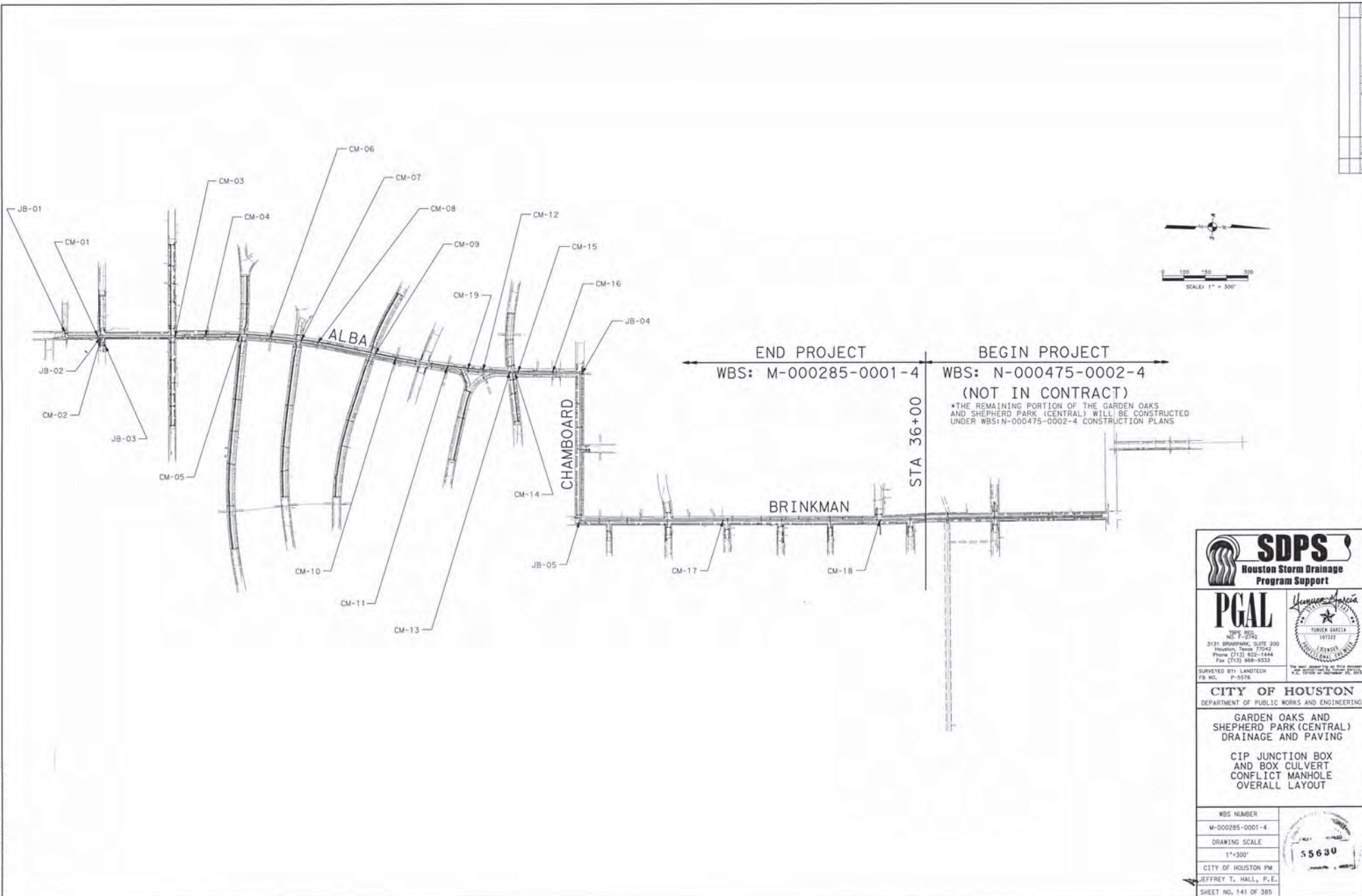
CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING
DRIVEWAY TABLE
SHEET 9 OF 9

WBS NUMBER
M-000285-0001-4
DRAWING SCALE
AS IS
CITY OF HOUSTON PW
JEFFREY T. HALL, P.E.
SHEET NO. 140 OF 385



DATE: 9/20/2015 8:00:01 PM
P:\020285-0001\0001 - Drive\Drawings\Draw_T.mxd.dgn



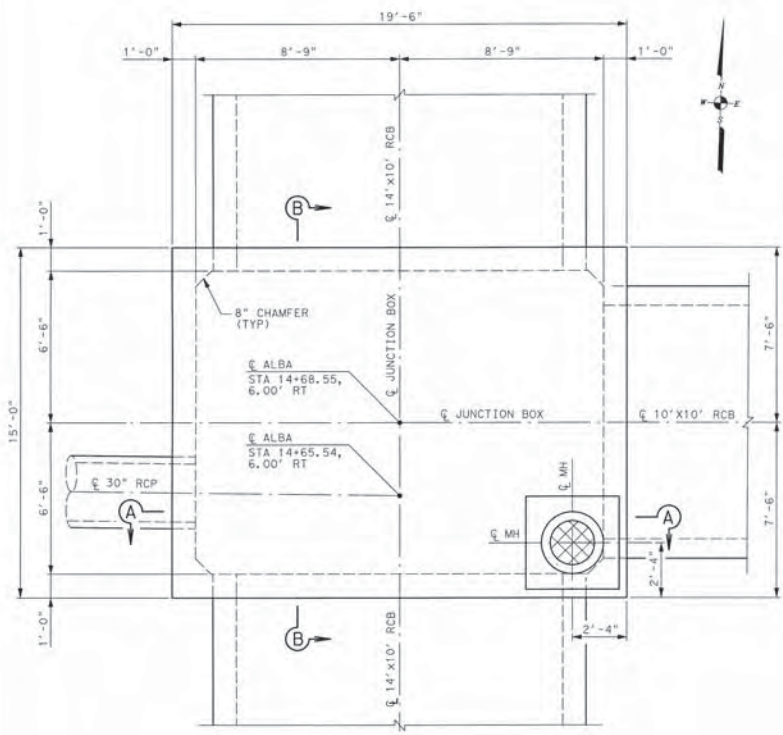
END PROJECT BEGIN PROJECT
 WBS: M-000285-0001-4 WBS: N-000475-0002-4

STA 36+00

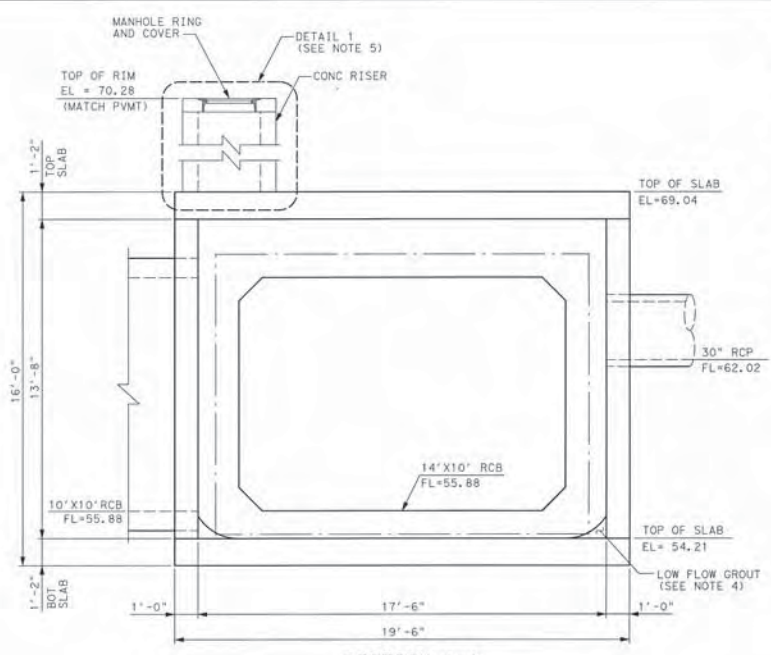
(NOT IN CONTRACT)
 *THE REMAINING PORTION OF THE GARDEN OAKS
 AND SHEPHERD PARK (CENTRAL) WILL BE CONSTRUCTED
 UNDER WBS: N-000475-0002-4 CONSTRUCTION PLANS

<p> 3131 BRADDOCK, SUITE 200 HOUSTON, TEXAS 77042 PHONE (713) 622-1444 FAX (713) 668-9333 </p>	
<p> SUPPLIED BY: LANDTECH P-1076 </p>	
<p> CITY OF HOUSTON DEPARTMENT OF PUBLIC WORKS AND ENGINEERING </p>	
<p> GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING </p>	
<p> CIP JUNCTION BOX AND BOX CULVERT CONFLICT MANHOLE OVERALL LAYOUT </p>	
<p> WBS NUMBER M-000285-0001-4 </p>	
<p> DRAWING SCALE 1"=300' </p>	
<p> CITY OF HOUSTON PM JEFFREY T. HALL, P.E. SHEET NO. 141 OF 385 </p>	

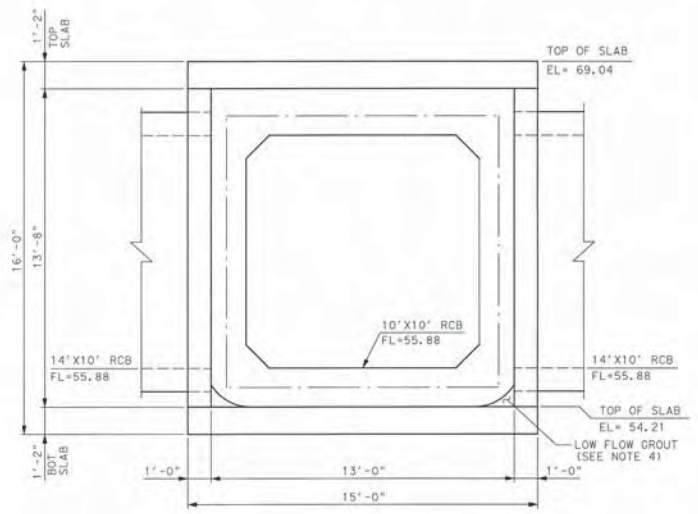
DATE: 04/27/2015 4:07:05 PM
 P:\000285\200\0001\0001\0001\0001.dwg



PLAN - JUNCTION BOX
SCALE: 3/8"=1'-0"



SECTION A-A
SCALE: 3/8"=1'-0"



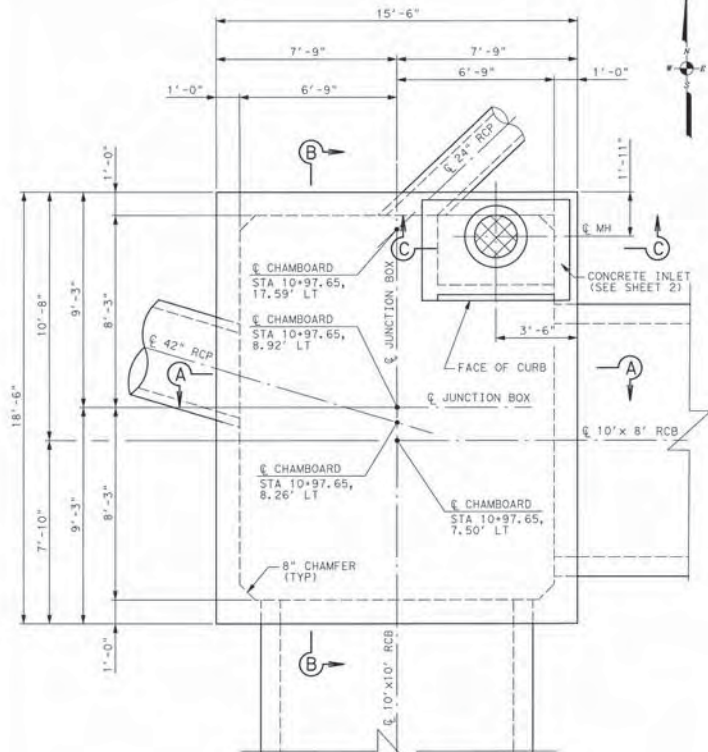
SECTION B-B
SCALE: 3/8"=1'-0"

NOTES:

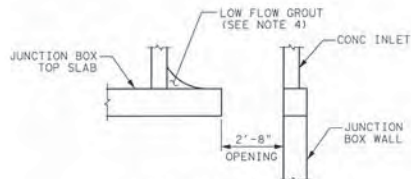
1. AS APPROVED BY THE ENGINEER, ALTERNATE DESIGN DRAWINGS BEARING THE SEAL OF A REGISTERED PROFESSIONAL ENGINEER MAY BE ACCEPTABLE FOR PRECAST CONSTRUCTION OF THE JUNCTION BOX AND/OR RISER.
2. REINFORCING SHALL BE PROVIDED AS SHOWN ON THE "JUNCTION BOX TYPE 2 DETAILS" SHEET.
3. IN AREAS OF CONFLICT BETWEEN REINFORCING STEEL, BLOCKOUTS, PIPES, ANCHOR BOLTS OR OTHER REINFORCING STEEL, THE REINFORCEMENT SHALL BE BENT OR ADJUSTED TO CLEAR AS DIRECTED BY THE ENGINEER.
4. LOW FLOW GROUT SHALL BE PLACED TO MINIMIZE THE ACCUMULATION OF SILT AND DEBRIS.
5. FOR CONCRETE RISER AND MANHOLE INFORMATION, SEE "JUNCTION BOX MISCELLANEOUS DETAILS" SHEETS.

JUNCTION BOX
TYPE 2 DESIGN

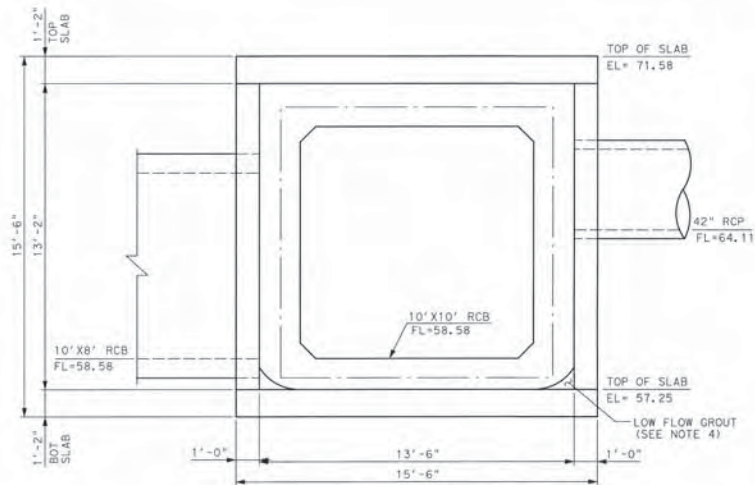
<p>3131 BRIDGEMARK, SUITE 200 HOUSTON, TEXAS 77042 PHONE (713) 622-1444 FAX (713) 968-9333</p>	
<p>SURVEYED BY: LANTECH FB NO. 91-0576</p>	
<p>CITY OF HOUSTON DEPARTMENT OF PUBLIC WORKS AND ENGINEERING</p>	
<p>GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING</p>	
<p>JUNCTION BOX LAYOUT JB-02</p>	
<p>WBS NUMBER M-000285-0001-4</p>	
<p>DRAWING SCALE AS NOTED</p>	
<p>CITY OF HOUSTON PW JEFFREY T. HALL, P.E. SHEET NO. 143 OF 385</p>	



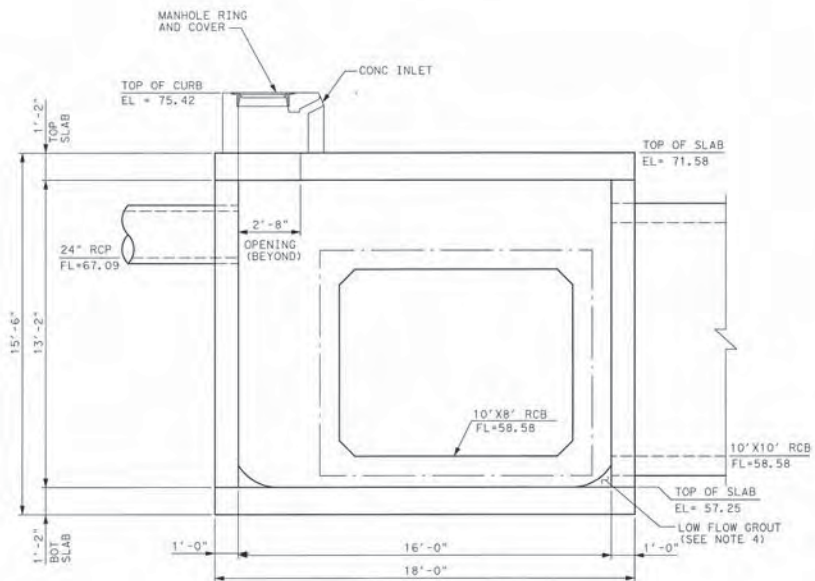
PLAN - JUNCTION BOX
SCALE: 3/8" = 1'-0"



SECTION C-C
SCALE: 3/8" = 1'-0"



SECTION A-A
SCALE: 3/8" = 1'-0"



SECTION B-B
SCALE: 3/8" = 1'-0"

NOTES:

- AS APPROVED BY THE ENGINEER, ALTERNATE DESIGN DRAWINGS BEARING THE SEAL OF A REGISTERED PROFESSIONAL ENGINEER MAY BE ACCEPTABLE FOR PRECAST CONSTRUCTION OF THE JUNCTION BOX AND/OR RISER.
- REINFORCING SHALL BE PROVIDED AS SHOWN ON THE "JUNCTION BOX TYPE 2 DETAILS" SHEETS.
- IN AREAS OF CONFLICT BETWEEN REINFORCING STEEL, BLOCKOUTS, PIPES, ANCHOR BOLTS OR OTHER REINFORCING STEEL, THE REINFORCING SHALL BE BENT OR ADJUSTED TO CLEAR AS DIRECTED BY THE ENGINEER.
- LOW FLOW GROUT SHALL BE PLACED TO MINIMIZE THE ACCUMULATION OF SILT AND DEBRIS.
- SHOP DRAWINGS WILL BE REQUIRED FOR PRECAST CONSTRUCTION OF INLETS.
- RING AND COVER SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M306, "STANDARD SPECIFICATION FOR DRAINAGE STRUCTURE CASTINGS". MATERIAL SHALL CONFORM TO ASTM A48, CLASS 35B FOR GRAY IRON CASTINGS OR ASTM A536, GRADE 65-45-12 FOR DUCTILE IRON CASTINGS. ALUMINUM ALLOY CASTINGS SHALL NOT BE PERMITTED.

JUNCTION BOX
TYPE 2 DESIGN



SUPERVISED BY: LANDTECH P-45176

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND
SHEPHERD PARK (CENTRAL)
DRAINAGE AND PAVING

JUNCTION BOX
LAYOUT JB-04

SHEET 1 OF 2

WDS NUMBER

M-000285-0001-4

DRAWING SCALE

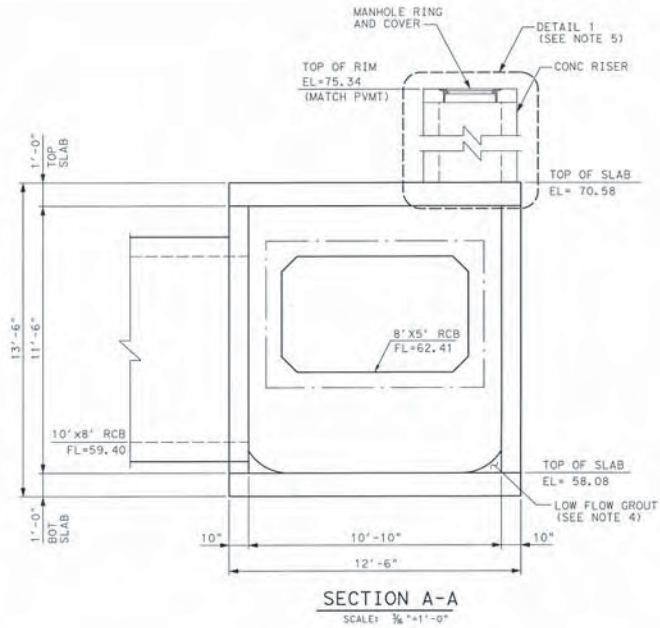
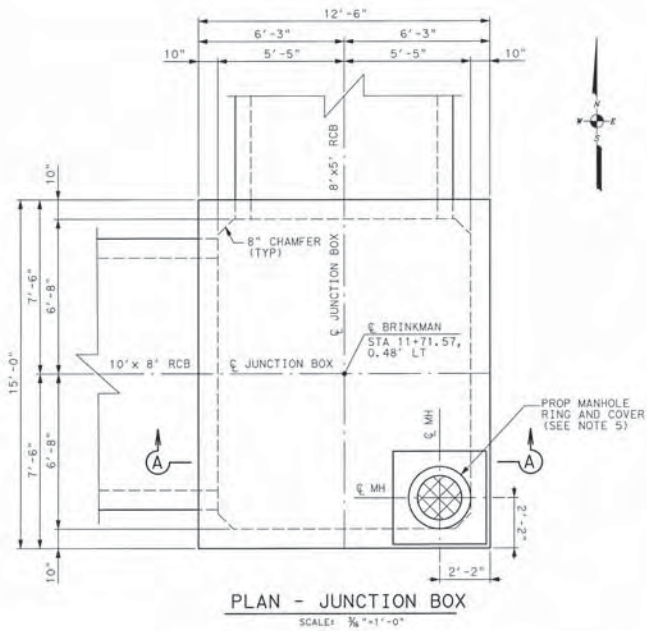
AS NOTED

CITY OF HOUSTON PM

JEFFREY T. HALL, P.E.

SHEET NO. 145 OF 385





NOTES:

1. AS APPROVED BY THE ENGINEER, ALTERNATE DESIGN DRAWINGS BEARING THE SEAL OF A REGISTERED PROFESSIONAL ENGINEER MAY BE ACCEPTABLE FOR PRECAST CONSTRUCTION OF THE JUNCTION BOX AND/OR RISER.
2. REINFORCING SHALL BE PROVIDED AS SHOWN ON THE "JUNCTION BOX TYPE 2 DETAILS" SHEETS.
3. IN AREAS OF CONFLICT BETWEEN REINFORCING STEEL, BLOCKOUTS, PIPES, ANCHOR BOLTS OR OTHER REINFORCING STEEL, THE REINFORCEMENT SHALL BE BENT OR ADJUSTED TO CLEAR AS DIRECTED BY THE ENGINEER.
4. LOW FLOW GROUT SHALL BE PLACED TO MINIMIZE THE ACCUMULATION OF SILT AND DEBRIS.
5. FOR CONCRETE RISER AND MANHOLE INFORMATION, SEE "JUNCTION BOX MISCELLANEOUS DETAILS" SHEETS.

JUNCTION BOX
TYPE 2 DESIGN



PGAL
TYPE REG. NO. F-2942
3131 BRINKMAN, SUITE 200
Houston, Texas 77042
Phone (713) 923-1444
Fax (713) 988-8333

Yunker Garcia
YUNKER GARCIA
197322
Professional Engineer
No. 1393

SUPERVISED BY: LANDTECH
P.E. NO. 10016

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND
SHEPHERD PARK (CENTRAL)
DRAINAGE AND PAVING

JUNCTION BOX
LAYOUT JB-05

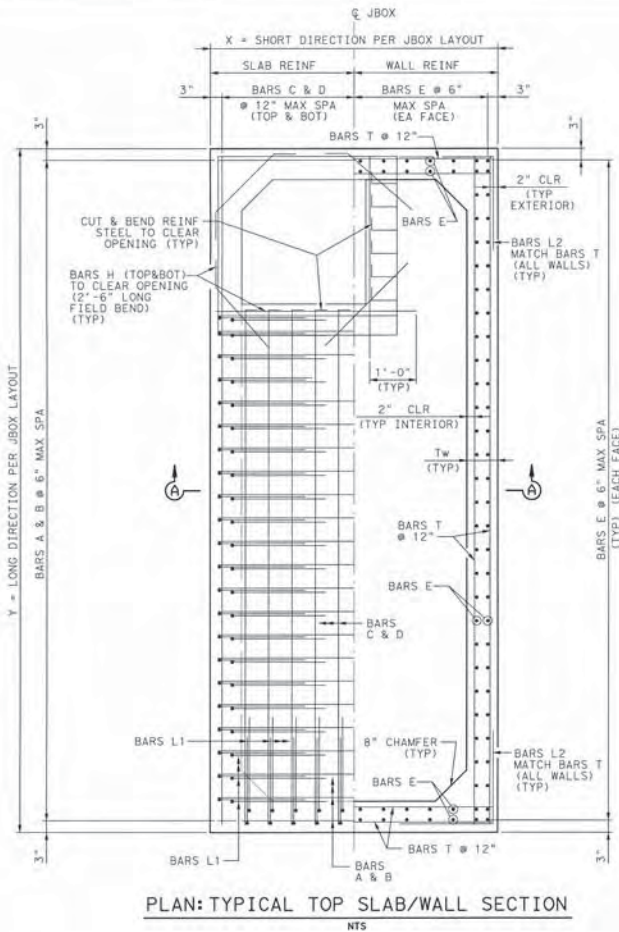
WBS NUMBER
M-00285-0001-4

DRAWING SCALE

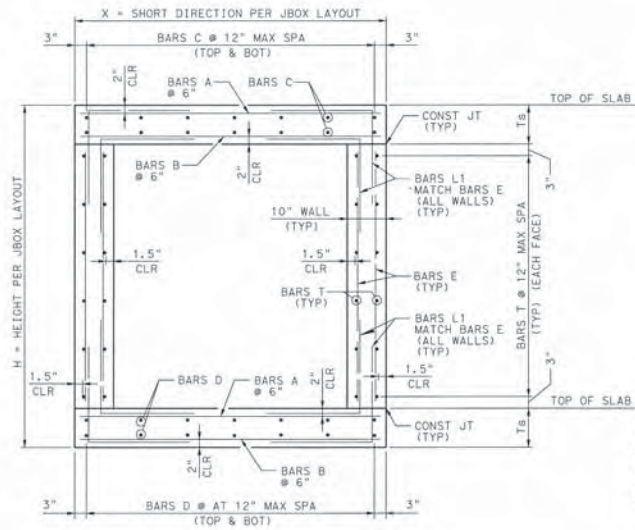
AS NOTED

CITY OF HOUSTON PM
JEFFREY T. HALL, P.E.
SHEET NO. 147 OF 385

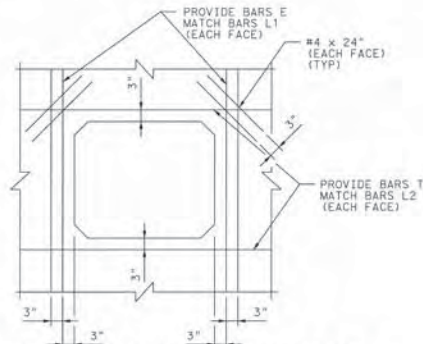
55630



PLAN: TYPICAL TOP SLAB/WALL SECTION
NTS



SECTION A-A: TYPICAL TOP SLAB/WALL SECTION
NTS



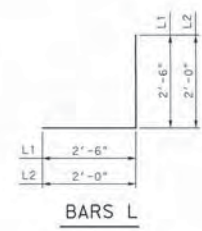
ELEVATION: REINFORCEMENT AT OPENING
NTS

NOTES:

1. CONCRETE SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3600 psi.
2. REINFORCING STEEL SHALL HAVE A MINIMUM YIELD STRENGTH OF 60 KSI. DIMENSIONS ARE TO THE CENTERLINE OF BAR UNLESS OTHERWISE NOTED. SUBMIT SHOP DRAWINGS FOR EACH JUNCTION BOX TO BE APPROVED BY THE ENGINEER.

BAR TABLE	
BARS	SIZE
A	#5
B	#5
C	#4
D	#4
E	#5
H	#6
L1	#5
L2	#4
T	#4

JUNCTION BOX TABLE						
BOX NAME	WIDTH (X)	LENGTH (Y)	HEIGHT (H)	SLAB THICK (Ts)	WALL THICK (Tw)	
JB-01	8"	19"	15.5"	12"	10"	



BARS L

SDPS
Houston Storm Drainage
Program Support

PGAL
3131 BROADWAY, SUITE 200
HOUSTON, TEXAS 77062
PHONE (713) 822-1444
FAX (713) 968-9333

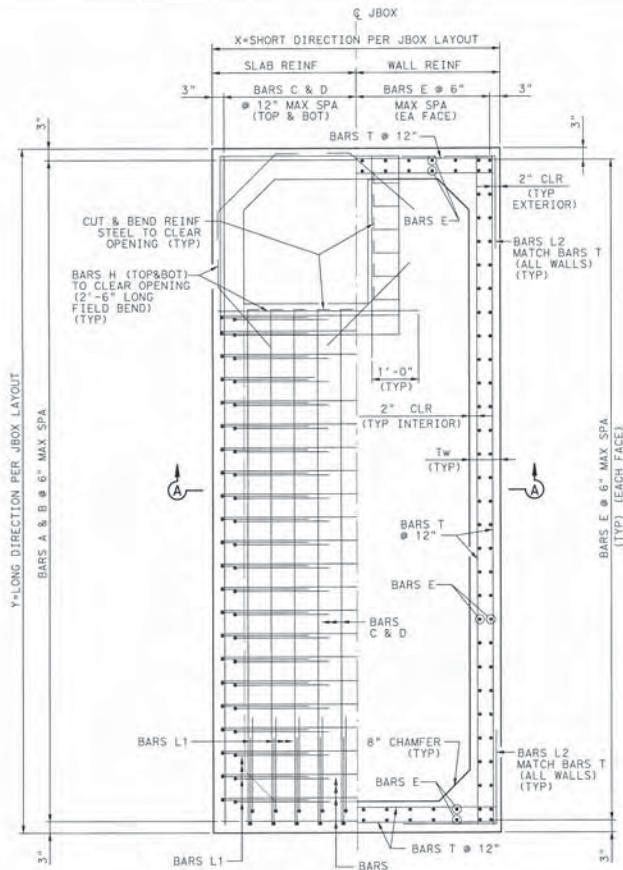
SURVEYED BY: LANDTECH
FIR NO. P-5576

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

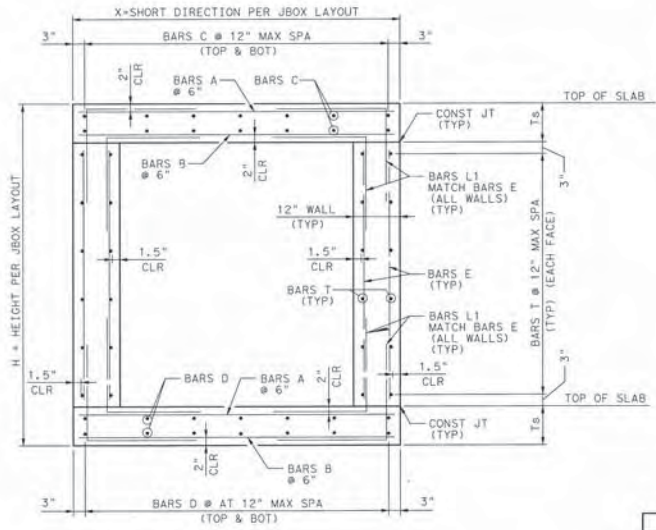
GARDEN OAKS AND
SHEPHERD PARK (CENTRAL)
DRAINAGE AND PAVING

JUNCTION BOX
TYPE 3
DETAILS

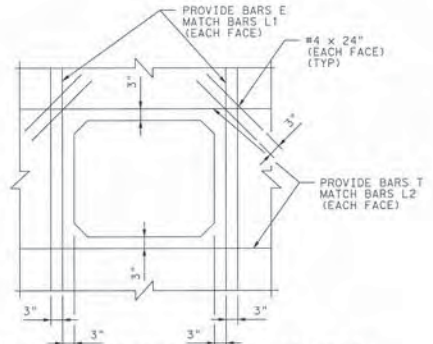
WBS NUMBER
M-000285-0001-4
DRAWING SCALE
N.T.S.
CITY OF HOUSTON PM
JEFFREY T. HALL, P.E.
SHEET NO. 148 OF 385



PLAN: TYPICAL TOP SLAB/WALL SECTION
NTS



SECTION A-A: TYPICAL TOP SLAB/WALL SECTION
NTS



ELEVATION: REINFORCEMENT AT OPENING
NTS

NOTES:

1. CONCRETE SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3600 psl.
2. REINFORCING STEEL SHALL HAVE A MINIMUM YIELD STRENGTH OF 60 ksi. DIMENSIONS ARE TO THE CENTERLINE OF BAR UNLESS OTHERWISE NOTED. SUBMITT SHOP DRAWINGS FOR EACH JUNCTION BOX TO BE APPROVED BY THE ENGINEER.

BAR TABLE	
BAR	SIZE
A	#6
B	#6
C	#4
D	#4
E	#5
H	#6
L1	#5
L2	#4
T	#4

JUNCTION BOX TABLE						
BOX NAME	WIDTH (X)	LENGTH (Y)	HEIGHT (H)	SLAB THICK (Ts)	WALL THICK (Tw)	
JB-02	15.5'	19.5'	16"	14"	12"	
JB-03	11.5'	11.5'	12"	12"	10"	
JB-04	15.5'	18.5'	15.5"	14"	12"	
JB-05	12.5'	15'	13.5"	12"	10"	



SDPS
Houston Storm Drainage Program Support

PGAL
1295 3052
162-7742
3131 BISHOP PARK, SUITE 200
Houston, Texas 77042
Phone: (713) 822-1444
Fax: (713) 968-9333

Yumeng Garcia
REVIEWER
19/12/21

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

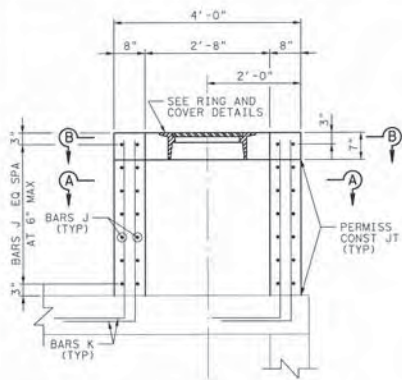
JUNCTION BOX TYPE 2 DETAILS

WBS NUMBER
M-000285-0001-4

DRAWING SCALE
N.T.S.

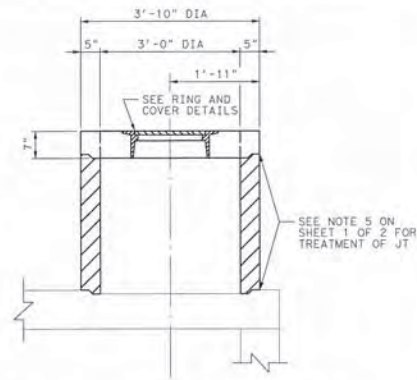
CITY OF HOUSTON PW
JEFFREY T. HALL, P.E.
SHEET NO. 149 OF 385

55630

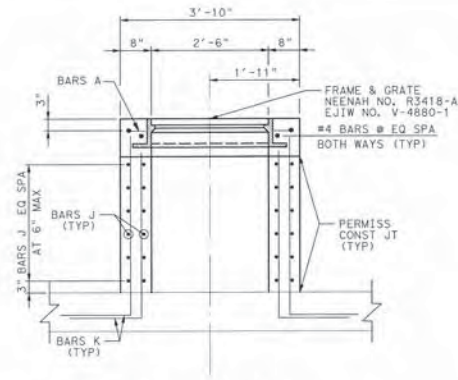


DETAIL 1: CONCRETE RISER
 $\frac{3}{8}'' \pm 1'-0''$

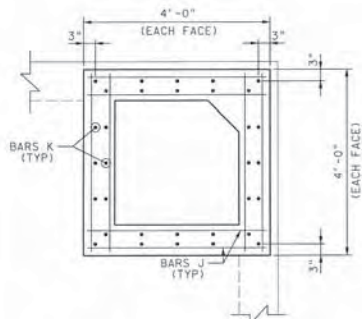
NOTE: ORIENT BAR K TAILS
 WITHIN EXTERIOR WALLS



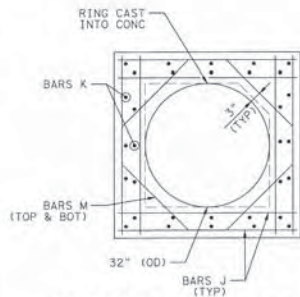
DETAIL 1: OPTIONAL CONCRETE PIPE RISER
 $\frac{3}{8}'' \pm 1'-0''$



DETAIL 2: CONCRETE RISER
 $\frac{3}{8}'' \pm 1'-0''$



SECTION A-A
 $\frac{3}{8}'' \pm 1'-0''$

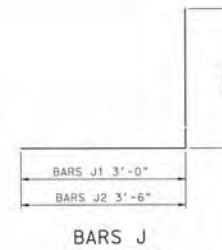


SECTION B-B: TOP OF MANHOLE
 $\frac{3}{8}'' \pm 1'-0''$

NOTES:

1. CONCRETE SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3600 psi.
2. REINFORCING STEEL SHALL HAVE A MINIMUM YIELD STRENGTH OF 60 ksi. DIMENSIONS ARE TO THE CENTERLINE OF BAR UNLESS OTHERWISE NOTED. SUBMITT SHOP DRAWINGS FOR EACH JUNCTION BOX TO BE APPROVED BY THE ENGINEER.
3. THE RISER MAY BE CONSTRUCTED OF REINFORCED CONCRETE AS SHOWN OR OF REINFORCED CONCRETE PIPE, CLASS III, IN ACCORDANCE WITH ASTM DESIGNATION C-76. IF PIPE IS USED, JOINTS SHALL CONFORM TO THE ITEM "REINFORCED CONCRETE PIPE CULVERTS." PRECAST CONCRETE LIFT-OFF COVER MAY BE SUBSTITUTED FOR RING AND COVER AS APPROVED BY THE ENGINEER.
4. THE RISER, EITHER CAST-IN-PLACE OR CONCRETE PIPE, SHALL BE LOCATED PER THE "JUNCTION BOX LAYOUT" SHEETS.
5. RING AND COVER SHALL BE AS SHOWN ELSEWHERE IN THE PLANS.

BAR TABLE	
BAR	SIZE
J	#5
K	#5
A	#4
L	#4



3131 SHAWFARKE, SUITE 200
 HOUSTON, TEXAS 77042
 PHONE (713) 822-1444
 FAX (713) 968-9333



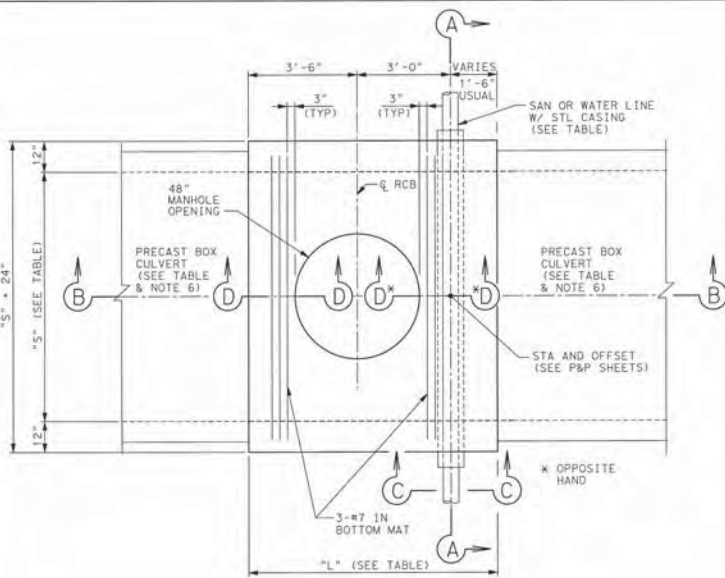
CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND
 SHEPHERD PARK (CENTRAL)
 DRAINAGE AND PAVING

JUNCTION BOX
 MISCELLANEOUS
 DETAILS

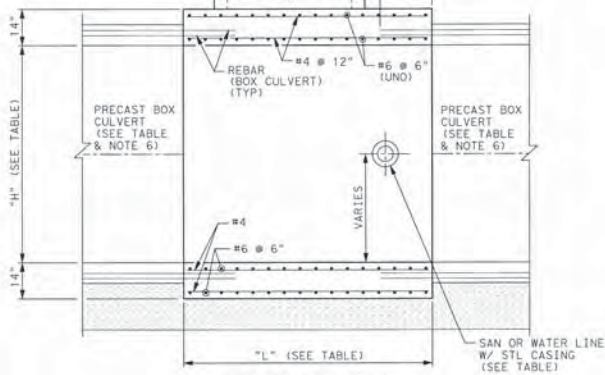
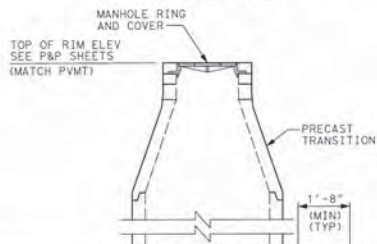
WBS NUMBER
 M-000285-0001-4
 DRAWING SCALE
 AS NOTED
 CITY OF HOUSTON PM
 JEFFREY T. HALL, P.E.
 SHEET NO. 150 OF 385



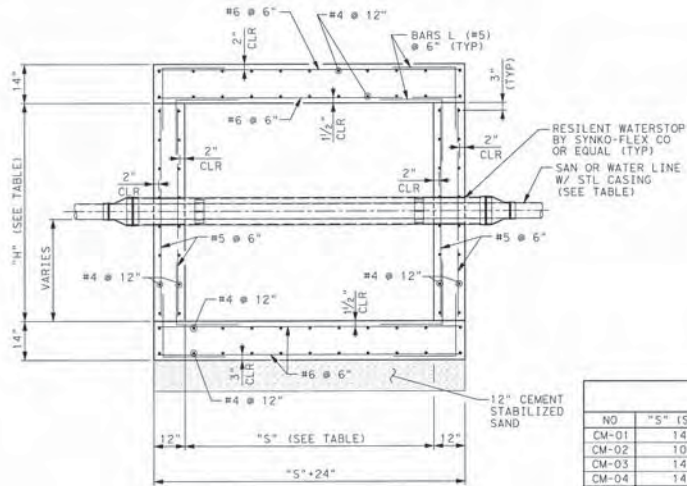


PLAN

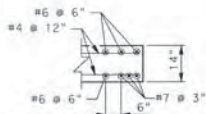
(90° CONFLICT SHOWN, SKEWED SIMILAR)



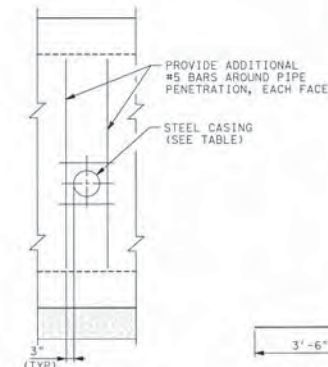
SECTION B-B



SECTION A-A

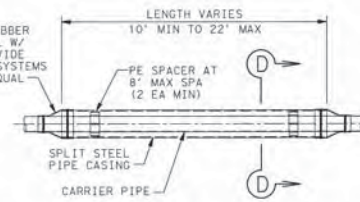


SECTION D-D

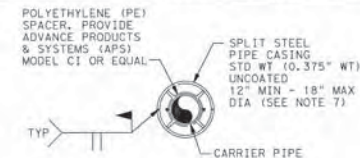


SECTION C-C

BARS L



SPLIT STEEL PIPE CASING DETAIL



SECTION D-D

NOTES:

- DESIGNED FOR 3-FT OF FILL WITH HS20 LOADING IN ACCORDANCE WITH 2010 AASHTO SPECIFICATIONS.
- CONCRETE SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3600 PSI.
- REINFORCING STEEL SHALL HAVE A MINIMUM YIELD STRENGTH OF 60 KSI. DIMENSIONS ARE TO THE CENTERLINE OF BAR UNLESS OTHERWISE NOTED.
- ADJACENT PRECAST RCB BOXES SHALL BE CAST SHORT AND THE RCB REINFORCING SHALL EXTEND 1'-8" INTO THE MODIFIED RCB.
- IN LIEU OF THE NON-SHRINK GROUT, THE CONTRACTOR MAY MONOLITHICALLY CAST THE STEEL CASING INTO THE BOTTOM SLAB.
- EXPOSE PRECAST BOX CULVERT REBAR 1'-8" MINIMUM. SEE SECTION B-B.
- CASING PIPE SHALL CONFORM TO SPEC SECTION 02502 - STEEL PIPE AND FITTINGS. SPLIT CASING SHALL BE INSTALLED WITH CONTINUOUS WELDS FULL CASING LENGTH, REMOVE SLAG, BRUSH CLEAN AND COAT WITH ZINC PAINT.
- PREFABRICATED SPLIT/BOLTED STEEL CASING MAY BE ACCEPTED AS ALTERNATE, PROVIDE IRONHEAD PART FMP OR APPROVED EQUAL.

SUMMARY OF CONFLICT MANHOLES

NO	"S" (SPAN)	"H" (HEIGHT)	"L" (LENGTH)	UTILITY	CASING
CM-01	14'	10'	8'	8" PVC WATER	14" SPLIT STEEL
CM-02	10'	10'	8'	8" PVC WATER	14" SPLIT STEEL
CM-03	14'	10'	9'	8" PVC WATER	14" SPLIT STEEL
CM-04	14'	10'	14'	8" PVC WATER	14" SPLIT STEEL
CM-05	14'	10'	9'	12" PVC WATER	18" SPLIT STEEL
CM-06	12'	10'	8'	EXIST 8" SAN	14" SPLIT STEEL
CM-07	12'	10'	8'	8" PVC WATER	14" SPLIT STEEL
CM-08	12'	10'	8'	EXIST 8" SAN	14" SPLIT STEEL
CM-10	12'	10'	8'	EXIST 8" SAN	14" SPLIT STEEL
CM-11	10'	10'	8'	EXIST 8" SAN	14" SPLIT STEEL
CM-12	10'	10'	8'	EXIST 8" SAN	14" SPLIT STEEL
CM-13	10'	10'	17'	EXIST 12" SAN	18" SPLIT STEEL
CM-14	10'	100'	6'	8" PVC WATER	14" SPLIT STEEL
CM-15	10'	10'	8'	EXIST 8" SAN	14" SPLIT STEEL
CM-16	10'	10'	8'	EXIST 8" SAN	14" SPLIT STEEL
CM-17	8'	5'	8'	EXIST 6" SAN	12" SPLIT STEEL

SDPS
Houston Storm Drainage Program Support

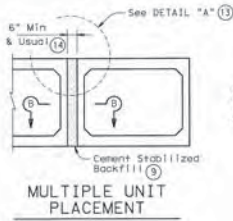
PGAL
3131 BIRNBAUM, SUITE 200
Houston, Texas 77002
Phone (713) 629-1444
Fax (713) 968-9333

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

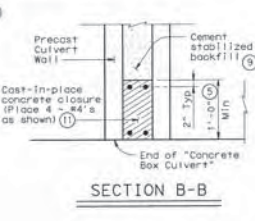
GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

BOX CULVERT CONFLICT MANHOLE TYPE "A"

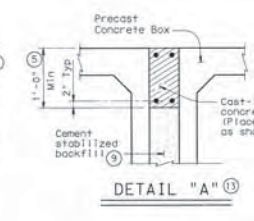
WBS NUMBER: M-000285-0001-4
DRAWING SCALE: 1/2" = 1'-0"
CITY OF HOUSTON PM: JEFFREY T. HALL, P.E.
SHEET NO. 151 OF 385



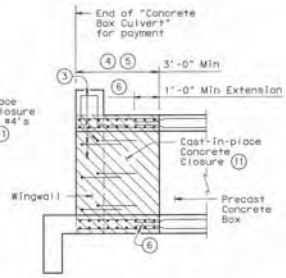
MULTIPLE UNIT PLACEMENT



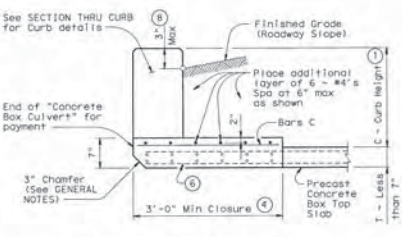
SECTION B-B



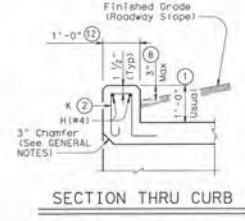
DETAIL "A"



WINGWALL CONNECTION
(Also applies to Safety End Treatment)



SECTION THRU TOP SLABS LESS THAN 7"

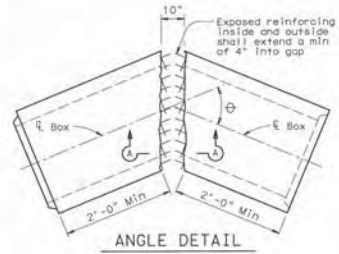


SECTION THRU CURB

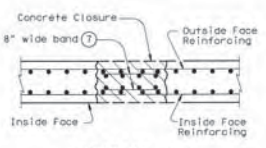
(10) QUANTITIES PER FOOT OF CURB	
Reinforcing Steel	4.18 Lb
Concrete	0.037 CY

BARS C ~ #4
(Spa = 1'-0" Max)

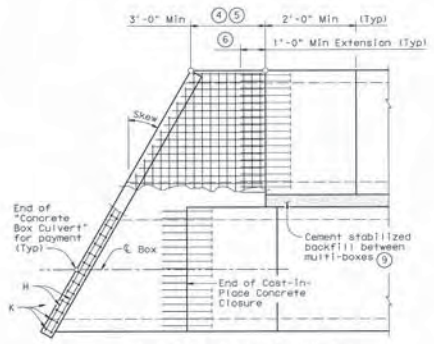
BARS K ~ #4
(Spa = 1'-0" Max)
(Length = 4'-3")



ANGLE DETAIL



SECTION A-A



PLAN OF SKEWED ENDS
(Showing multi-box placement)

- 1 0" min to 5'-0" max. Estimated curb heights are shown elsewhere in the plans. For structures with pedestrian rail, bicycle rail or curbs taller than 1'-0", refer to ECD standard. For structures with T6 traffic rail, refer to T6-CM standard. For structures with traffic rail, other than T6, refer to RAC standard.
- 2 For curbs less than 1'-0" high, tilt Bars K or reduce bar height as necessary to maintain cover. For curbs less than 3' high, Bars K may be omitted.
- 3 Curb, Wingwall or Safety End Treatment reinforcing shall extend into concrete closure. Any reinforcing that does not fit into the closure shall be bent or trimmed as necessary.
- 4 Cast-in-place concrete closure shall be 3'-0" min. Boxes shall be cast short or broken back in the field. All reinforcing in the closure shall be the same size and spacing as in the precast box section. Except where shown otherwise, the cast-in-place closure shall be flush with the inside and outside faces of the precast box section.
- 5 For multiple unit placements the length of the closure for the interior walls may be adjusted as necessary. The length of the top slab, bottom slab, and exterior wall closure shall not be less than 3'-0". See Section B-B detail when interior walls are cast full length.
- 6 Precast box reinforcing shall extend a minimum of 1'-0" into concrete closure (Typ).
- 7 Bands of reinforcing matching the inside and outside face reinforcing shall be placed in the gaps of the top and bottom slabs. A band matching the outside face reinforcing of the wall shall be placed in the gaps of the walls (placed in the outside face only). The bands shall be tied welded to the exposed reinforcing at each point of contact.
- 8 For vehicle safety, the following requirements must be met:
 - For structures without bridge rail, curbs shall project no more than 3" above finished grade.
 - For structures with bridge rail, curbs shall be flush with finished grade.
 Curb heights shall be reduced, if necessary, to meet the above requirements. No changes will be made in quantities and no additional compensation will be allowed for this work.
- 9 Cement Stabilized Backfill between boxes is considered part of the Box Culvert for payment.
- 10 All curb concrete and reinforcing is considered part of the Box Culvert for payment.
- 11 Any additional concrete and reinforcing required for the closures shall be considered as subsidiary to the Concrete Box Culvert.
- 12 1'-0" typical, 2'-0" when RAC standard is referred to elsewhere in the plans.
- 13 For multiple unit placement with overlay, with 1 to 2 course surface treatment, or with the top slab as the final riding surface, provide wall closure as shown in DETAIL "A".
- 14 This dimension may be increased with approval of the Engineer to allow the precast boxes to be turned or jacked in accordance with Item 476, "Jacking, Boring, or Tunneling Pipe or Box". No payment will be made for any additional material in the gap between adjacent boxes.

GENERAL NOTES:
Designed according to AASHTO LRFD Specifications.
All closure concrete shall be Class "C" with a minimum compressive strength of 3600 psi and shall be placed according to the item, "Concrete Structures".
Any additional concrete required for the closures shall be considered as subsidiary to the Concrete Box Culvert.
Refer to the Single Box Culverts Precast standard for details not shown.
The bottom edge of the top slab closure shall be chamfered 3 inches at the entrance.

HL93 LOADING

Texas Department of Transportation
Texas Division

BOX CULVERTS
PRECAST
MISCELLANEOUS DETAILS

SCP-MD

FILE#	SCCP-MD.dgn	REV	DATE	BY	CHK	APP
(1)	1/20/10	DESIGNED	2/10/10	PERKINS	AND	PROBERT
(2)	1/20/10	REVISED				
PROJECT		COUNTY	CENTRAL	SECTION	JOB	NO. 385

SDPS
Houston Storm Drainage
Program Support

PGAL
3131 BIRNBAUM PARK, SUITE 200
HOUSTON, TEXAS 77042
PHONE (713) 822-1444
FAX (713) 968-8333

INSPECTED BY: LANDTECH
P. B. NO. 0-2516

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND
SHEPHERD PARK (CENTRAL)
DRAINAGE AND PAVING

BOX CULVERTS
PRECAST
MISCELLANEOUS DETAILS

WBS NUMBER
M-000285-0001-4
DRAWING SCALE
NTS
CITY OF HOUSTON PM
JEFFREY T. HALL, P. E.
SHEET NO. 153 OF 385

DATE: 9/28/2005 2:25:55 PM
 A:\MDDP\45\2005\0001\DWG\CONCRETE\CPM_01.dwg
 PLANT: 153 OF 385
 SHEET: 153 OF 385
 DRAWN BY: JTH
 CHECKED BY: JTH
 DISCLAIMER: No use of this drawing is authorized by the Texas Engineering Experiment Station (TEXES) without the written consent of the Texas Engineering Experiment Station. The user assumes no responsibility for the conversion of this standard to other formats or for any errors or omissions in this drawing.

85\1100108455\CAD\0000\DWG\000004\DWG\000004.dwg

DISCLAIMER:
 The use of any of the information shown on this drawing is made at the user's sole risk and without liability for the consequences of its use. The user assumes all responsibility for the consequences of its use. The user agrees to indemnify and hold the designer harmless from all claims, damages, costs and expenses, including reasonable attorney's fees, arising out of or from the use of this drawing.

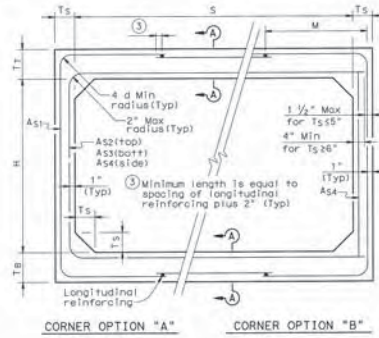
4000

SCALE

BOX DATA

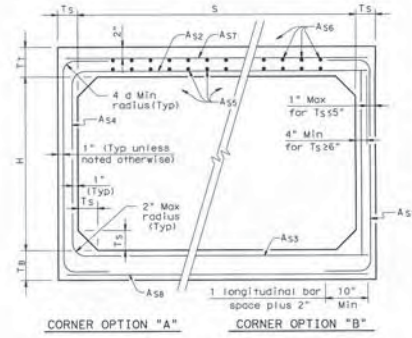
SECTION DIMENSIONS					Fill Height (ft)	M (Min)	REINFORCING (in ² /ft) ②								Lift Weight (Tons) ①
S (ft)	H (ft)	T ₁ (in)	T ₂ (in)	T ₃ (in)			A ₅₁	A ₅₂	A ₅₃	A ₅₄	A ₅₅	A ₅₆	A ₅₇	A ₅₈	
6	3	8	7	7	42	-	0.20	0.31	0.22	0.17	0.19	0.19	0.17	7.9	
6	3	7	7	7	26.3	43	0.21	0.24	0.19	0.17	-	-	-	7.5	
6	3	7	7	7	3-5	39	0.17	0.18	0.17	0.17	-	-	-	7.5	
6	3	7	7	7	10	39	0.17	0.18	0.19	0.17	-	-	-	7.5	
6	3	7	7	7	15	38	0.22	0.24	0.24	0.17	-	-	-	7.5	
6	3	7	7	7	20	38	0.28	0.31	0.31	0.17	-	-	-	7.5	
6	3	7	7	7	25	38	0.35	0.38	0.39	0.17	-	-	-	7.5	
6	3	7	7	7	30	38	0.42	0.46	0.46	0.17	-	-	-	7.5	
6	4	8	7	7	42	-	0.19	0.34	0.25	0.17	0.19	0.19	0.17	8.6	
6	4	7	7	7	26.3	43	0.19	0.27	0.21	0.17	-	-	-	8.2	
6	4	7	7	7	3-5	39	0.17	0.21	0.19	0.17	-	-	-	8.2	
6	4	7	7	7	10	39	0.17	0.20	0.21	0.17	-	-	-	8.2	
6	4	7	7	7	15	38	0.18	0.27	0.27	0.17	-	-	-	8.2	
6	4	7	7	7	20	38	0.24	0.34	0.35	0.17	-	-	-	8.2	
6	4	7	7	7	25	38	0.29	0.43	0.42	0.17	-	-	-	8.2	
6	4	7	7	7	30	38	0.35	0.51	0.52	0.17	-	-	-	8.2	
6	5	8	7	7	42	-	0.19	0.37	0.28	0.17	0.19	0.19	0.17	9.3	
6	5	7	7	7	26.3	43	0.17	0.30	0.24	0.17	-	-	-	8.9	
6	5	7	7	7	3-5	43	0.17	0.23	0.23	0.17	-	-	-	8.9	
6	5	7	7	7	10	39	0.17	0.22	0.23	0.17	-	-	-	8.9	
6	5	7	7	7	15	38	0.17	0.28	0.29	0.17	-	-	-	8.9	
6	5	7	7	7	20	38	0.20	0.37	0.38	0.17	-	-	-	8.9	
6	5	7	7	7	25	38	0.25	0.45	0.46	0.17	-	-	-	8.9	
6	5	7	7	7	30	38	0.30	0.54	0.55	0.17	-	-	-	8.9	
6	6	8	7	7	42	-	0.19	0.38	0.30	0.17	0.19	0.19	0.17	10.0	
6	6	7	7	7	26.3	52	0.17	0.32	0.26	0.17	-	-	-	9.6	
6	6	7	7	7	3-5	52	0.17	0.24	0.22	0.17	-	-	-	9.6	
6	6	7	7	7	10	43	0.17	0.23	0.24	0.17	-	-	-	9.6	
6	6	7	7	7	15	39	0.17	0.29	0.31	0.17	-	-	-	9.6	
6	6	7	7	7	20	39	0.18	0.38	0.39	0.17	-	-	-	9.6	
6	6	7	7	7	25	38	0.23	0.46	0.48	0.17	-	-	-	9.6	
6	6	7	7	7	30	38	0.27	0.55	0.57	0.17	-	-	-	9.6	

- ① For Box Length = 8'-0"
- ② A₅₁ thru A₅₄, A₅₇ and A₅₈ are minimum required areas of reinforcement per linear foot of box length. A₅₆ and A₅₅ are minimum required areas of reinforcement per linear foot of box width.



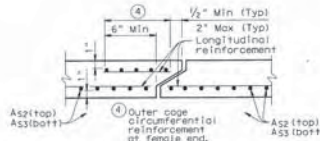
CORNER OPTION "A" CORNER OPTION "B"

FILL HEIGHT 2 FT AND GREATER



CORNER OPTION "A" CORNER OPTION "B"

FILL HEIGHT LESS THAN 2 FT



SECTION A-A
 (TOP AND BOTTOM SLAB JOINT REINFORCEMENT)

GENERAL NOTES:
 Designs shown conform to ASTM C1577. Refer to ASTM C1577 for information or details not shown.
 All concrete shall be Class "H" concrete with a minimum compressive strength of 5,000 psi.
 See SCP-M0 standard sheet for miscellaneous details and notes not shown.
 In lieu of furnishing the designs shown on this sheet, the contractor may furnish an alternate design that is equal to or exceeds the box design for the design fill height in the table. Shop plans for alternate designs shall be submitted in accordance with Item "Precast Concrete Structures".

HL93 LOADING



**SINGLE BOX CULVERTS
 PRECAST
 6'-0" SPAN**

SCP-6

FILED	BOOK	BY	DATE	TIME	BY	DATE	TIME
02/02/07	February 2007	08:00	08:00	08:00	08:00	08:00	08:00
COUNTY		SECTION		JOB		REVISION	



3131 BIRCHPARK, SUITE 200
 HOUSTON, TEXAS 77024
 Phone (713) 822-1444
 Fax (713) 988-9333



CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND
 SHEPHERD PARK (CENTRAL)
 DRAINAGE AND PAVING

**SINGLE BOX CULVERTS
 PRECAST
 6'-0" SPAN**

WBS NUMBER

M-000285-0001-4

DRAWING SCALE

NTS

CITY OF HOUSTON PM

JEFFREY T. HALL, P.E.

SHEET NO. 155 OF 385



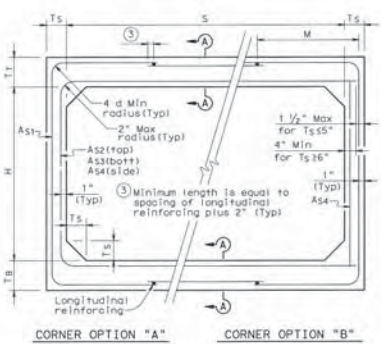
8/11/01029415-CAD\0090_DWG\0945-DWG.DWG

DISCLAIMER: This standard is governed by the "Texas Engineering Practice Act". No warranty of any kind is made by SDPS for any purpose whatsoever, other than to provide the information contained herein. The user assumes all other liability for any incorrect results or omissions resulting from this use.

DATE	BY	CHECKED

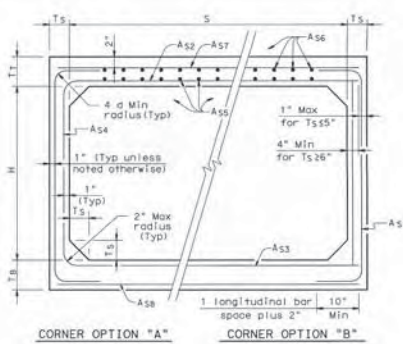
BOX DATA															
SECTION DIMENSIONS					Fill Height (ft)	M (in)	REINFORCING (in ² /ft) ②								Lift Weight (Tons)
S (ft)	H (ft)	T ₁ (in)	T ₂ (in)	T ₃ (in)			A _{S1}	A _{S2}	A _{S3}	A _{S4}	A _{S5}	A _{S6}	A _{S7}	A _{S8}	
8	4	8	8	8	<2	-	0.27	0.38	0.29	0.19	0.19	0.19	0.19	11.2	
8	4	8	8	8	2<3	50	0.31	0.34	0.32	0.19	-	-	-	11.2	
8	4	8	8	8	3-5	50	0.25	0.27	0.27	0.19	-	-	-	11.2	
8	4	8	8	8	10	45	0.26	0.28	0.29	0.19	-	-	-	11.2	
8	4	8	8	8	15	41	0.34	0.37	0.38	0.19	-	-	-	11.2	
8	4	8	8	8	20	41	0.44	0.48	0.49	0.19	-	-	-	11.2	
8	5	8	8	8	<2	-	0.24	0.40	0.32	0.19	0.19	0.19	0.19	12.0	
8	5	8	8	8	2<3	50	0.28	0.37	0.35	0.19	-	-	-	12.0	
8	5	8	8	8	3-5	45	0.23	0.29	0.30	0.19	-	-	-	12.0	
8	5	8	8	8	10	45	0.23	0.31	0.32	0.19	-	-	-	12.0	
8	5	8	8	8	15	41	0.30	0.41	0.42	0.19	-	-	-	12.0	
8	5	8	8	8	20	41	0.39	0.52	0.54	0.19	-	-	-	12.0	
8	6	8	8	8	<2	-	0.22	0.42	0.35	0.19	0.19	0.19	0.19	12.8	
8	6	8	8	8	2<3	50	0.25	0.40	0.38	0.19	-	-	-	12.8	
8	6	8	8	8	3-5	50	0.21	0.32	0.33	0.19	-	-	-	12.8	
8	6	8	8	8	10	45	0.22	0.33	0.34	0.19	-	-	-	12.8	
8	6	8	8	8	15	41	0.28	0.43	0.45	0.19	-	-	-	12.8	
8	6	8	8	8	20	41	0.36	0.55	0.57	0.19	-	-	-	12.8	
8	7	8	8	8	<2	-	0.20	0.44	0.37	0.19	0.19	0.19	0.19	13.6	
8	7	8	8	8	2<3	55	0.23	0.43	0.41	0.19	-	-	-	13.6	
8	7	8	8	8	3-5	55	0.19	0.34	0.35	0.19	-	-	-	13.6	
8	7	8	8	8	10	50	0.20	0.34	0.36	0.19	-	-	-	13.6	
8	7	8	8	8	15	41	0.26	0.45	0.47	0.19	-	-	-	13.6	
8	7	8	8	8	20	41	0.33	0.57	0.60	0.19	-	-	-	13.6	
8	8	8	8	8	<2	-	0.20	0.45	0.40	0.19	0.19	0.19	0.19	14.4	
8	8	8	8	8	2<3	65	0.21	0.45	0.44	0.19	-	-	-	14.4	
8	8	8	8	8	3-5	65	0.19	0.36	0.38	0.19	-	-	-	14.4	
8	8	8	8	8	10	55	0.19	0.35	0.38	0.19	-	-	-	14.4	
8	8	8	8	8	15	45	0.24	0.46	0.49	0.19	-	-	-	14.4	
8	8	8	8	8	20	45	0.31	0.59	0.62	0.19	-	-	-	14.4	

- ① For Box Length = 8'-0"
- ② A_{S1} thru A_{S4}, A_{S7} and A_{S8} are minimum required areas of reinforcement per linear foot of box length. A_{S5} and A_{S6} are minimum required areas of reinforcement per linear foot of box width.



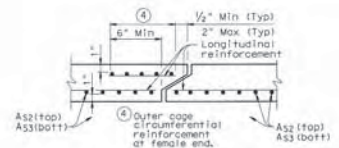
CORNER OPTION "A" CORNER OPTION "B"

FILL HEIGHT 2 FT AND GREATER



CORNER OPTION "A" CORNER OPTION "B"

FILL HEIGHT LESS THAN 2 FT



SECTION A-A
 (TOP AND BOTTOM SLAB JOINT REINFORCEMENT)

GENERAL NOTES:
 Design shown conform to ASTM C1577.
 Refer to ASTM C1577 for information or details not shown.
 All concrete shall be Class "H" Concrete with a minimum compressive strength of 5,000 psi.
 See SCP-M0 standard sheet for miscellaneous details and notes not shown.
 In lieu of furnishing the design shown on this sheet, the contractor may furnish an alternate design that is equal to or exceeds the box design for the design fill height in the table. Shop plans for alternate designs shall be submitted in accordance with Item "Precast Concrete Structures".

HL93 LOADING

Texas Department of Transportation
 Bridge Division

SINGLE BOX CULVERTS
 PRECAST
 8'-0" SPAN

SCP-8

FILED	SC00876.dwg	DR	CAF	DL	LAW	DR	DRY/TK007	DR	CAF
C	1/2007	February 2010	DESIGNED	REVISION	PERSONAL AND PROJECT	SHEET			

SDPS
 Houston Storm Drainage
 Program Support

PGAL
 3121 BRANFLOK, SUITE 200
 Houston, Texas 77042
 Phone (713) 622-1444
 Fax (713) 968-8333

CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND
 SHEPHERD PARK (CENTRAL)
 DRAINAGE AND PAVING

SINGLE BOX CULVERTS
 PRECAST
 8'-0" SPAN

WBS NUMBER
 M-000285-0001-4

DRAWING SCALE
 NTS

CITY OF HOUSTON PM
 JEFFREY T. HALL, P.E.

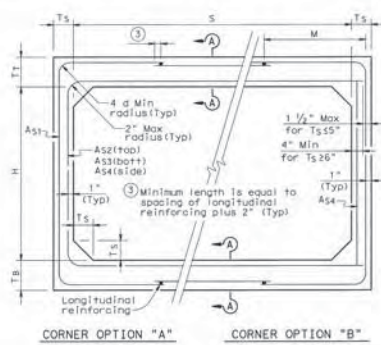
SHEET NO. 156 OF 385

DATE: 9/28/2025
 TIME: 2:55:50 PM
 RWAD09M52005002 D:\S\09M\09M_211_100.dwg

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	-----

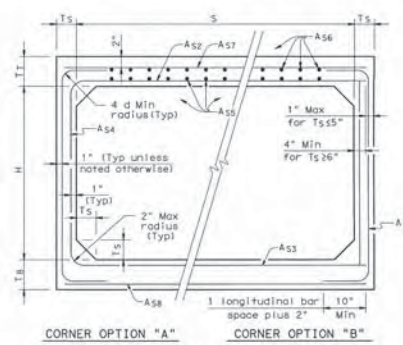
SECTION DIMENSIONS										BOX DATA										LIFT Weight (Tons)
S (ft)	H (ft)	T ₁ (in)	T ₂ (in)	T ₃ (in)	Fill Height (ft)	M (in)	A ₅₁	A ₅₂	A ₅₃	A ₅₄	A ₅₅	A ₅₆	A ₅₇	A ₅₈						
10	5	10	10	10	<2	-	0.30	0.36	0.30	0.24	0.24	0.24	0.24	0.24	17.5					
10	5	10	10	10	2<3	58	0.35	0.39	0.34	0.24	-	-	-	-	17.5					
10	5	10	10	10	3-5	53	0.28	0.31	0.30	0.24	-	-	-	-	17.5					
10	5	10	10	10	10	52	0.33	0.35	0.36	0.24	-	-	-	-	17.5					
10	5	10	10	10	15	47	0.42	0.46	0.47	0.24	-	-	-	-	17.5					
10	5	10	10	10	20	47	0.55	0.59	0.61	0.24	-	-	-	-	17.5					
10	5	10	10	10	25	47	0.68	0.73	0.75	0.24	-	-	-	-	17.5					
10	6	10	10	10	<2	-	0.28	0.38	0.33	0.24	0.24	0.24	0.24	0.24	18.5					
10	6	10	10	10	2<3	58	0.32	0.42	0.37	0.24	-	-	-	-	18.5					
10	6	10	10	10	3-5	52	0.26	0.34	0.33	0.24	-	-	-	-	18.5					
10	6	10	10	10	10	52	0.30	0.38	0.39	0.24	-	-	-	-	18.5					
10	6	10	10	10	15	47	0.39	0.49	0.51	0.24	-	-	-	-	18.5					
10	6	10	10	10	20	47	0.50	0.63	0.65	0.24	-	-	-	-	18.5					
10	6	10	10	10	25	47	0.61	0.78	0.80	0.24	-	-	-	-	18.5					
10	7	10	10	10	<2	-	0.25	0.40	0.36	0.24	0.24	0.24	0.24	0.24	19.5					
10	7	10	10	10	2<3	58	0.30	0.45	0.40	0.24	-	-	-	-	19.5					
10	7	10	10	10	3-5	58	0.24	0.36	0.35	0.24	-	-	-	-	19.5					
10	7	10	10	10	10	52	0.28	0.40	0.42	0.24	-	-	-	-	19.5					
10	7	10	10	10	15	47	0.36	0.52	0.54	0.24	-	-	-	-	19.5					
10	7	10	10	10	20	47	0.46	0.67	0.69	0.24	-	-	-	-	19.5					
10	7	10	10	10	25	47	0.56	0.82	0.85	0.24	-	-	-	-	19.5					
10	8	10	10	10	<2	-	0.24	0.41	0.38	0.24	0.24	0.24	0.24	0.24	20.5					
10	8	10	10	10	2<3	64	0.27	0.47	0.43	0.24	-	-	-	-	20.5					
10	8	10	10	10	3-5	58	0.24	0.38	0.38	0.24	-	-	-	-	20.5					
10	8	10	10	10	10	52	0.26	0.42	0.44	0.24	-	-	-	-	20.5					
10	8	10	10	10	15	47	0.34	0.54	0.57	0.24	-	-	-	-	20.5					
10	8	10	10	10	20	47	0.43	0.69	0.72	0.24	-	-	-	-	20.5					
10	9	10	10	10	<2	-	0.24	0.42	0.41	0.24	0.24	0.24	0.24	0.24	21.5					
10	9	10	10	10	2<3	70	0.26	0.50	0.46	0.24	-	-	-	-	21.5					
10	9	10	10	10	3-5	64	0.24	0.40	0.40	0.24	-	-	-	-	21.5					
10	9	10	10	10	10	58	0.25	0.43	0.46	0.24	-	-	-	-	21.5					
10	9	10	10	10	15	52	0.32	0.56	0.59	0.24	-	-	-	-	21.5					
10	9	10	10	10	20	47	0.40	0.71	0.75	0.24	-	-	-	-	21.5					
10	10	10	10	10	<2	-	0.24	0.44	0.44	0.24	0.24	0.24	0.24	0.24	22.5					
10	10	10	10	10	2<3	79	0.25	0.52	0.48	0.24	-	-	-	-	22.5					
10	10	10	10	10	3-5	70	0.24	0.42	0.43	0.24	-	-	-	-	22.5					
10	10	10	10	10	10	64	0.24	0.44	0.48	0.24	-	-	-	-	22.5					
10	10	10	10	10	15	52	0.30	0.57	0.61	0.24	-	-	-	-	22.5					
10	10	10	10	10	20	52	0.38	0.73	0.77	0.24	-	-	-	-	22.5					

- ① For Box Length = 8'-0"
- ② A₅₁ thru A₅₄, A₅₇ and A₅₈ are minimum required areas of reinforcement per linear foot of box length. A₅₆ and A₅₅ are minimum required areas of reinforcement per linear foot of box width.



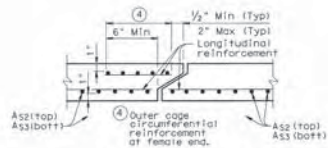
CORNER OPTION "A" CORNER OPTION "B"

FILL HEIGHT 2 FT AND GREATER



CORNER OPTION "A" CORNER OPTION "B"

FILL HEIGHT LESS THAN 2 FT



SECTION A-A

(TOP AND BOTTOM SLAB JOINT REINFORCEMENT)

GENERAL NOTES:
 Designs shown conform to ASTM C1577. Refer to ASTM C1577 for information or details not shown.
 All concrete shall be Class "H" Concrete with a minimum compressive strength of 5,000 psi.
 See SCP-MD standard sheet for miscellaneous details and notes not shown.
 In lieu of furnishing the designs shown on this sheet, the contractor may furnish an alternate design that is equal to or exceeds the box design for the design fill height in the table. Shop plans for alternate designs shall be submitted in accordance with Item "Precast Concrete Structures".

HL93 LOADING

Texas Department of Transportation
 Bridge Division

**SINGLE BOX CULVERTS
 PRECAST
 10'-0" SPAN**

SCP-10

FILE: scp10pre.dgn	DATE: 02/20/2010	BY: GAF	CHK: LHM	APP: BRW/TJG/DT	CR: GAF
DESCRIPTION	COUNTY	CONTROL	SECT	JOB	NO.

SDPS
 Houston Storm Drainage Program Support

PGAL
 3321 BROWNING, SUITE 200
 Houston, Texas 77042
 Phone (713) 822-1444
 Fax (713) 968-9333

CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

SINGLE BOX CULVERTS PRECAST 10'-0" SPAN

WBS NUMBER
 M-000285-0001-4

DRAWING SCALE
 NTS

CITY OF HOUSTON PM
 JEFFREY T. HALL, P. E.

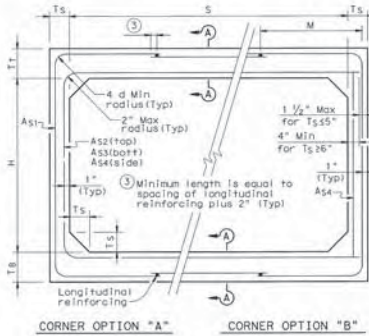
SHEET NO. 157 OF 395

LEVEL SURFACE
 ALCS

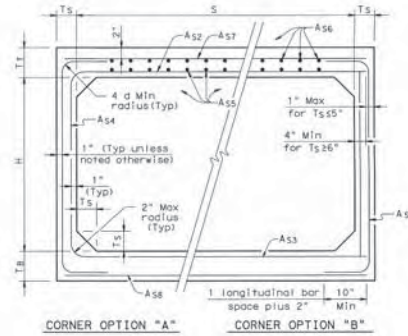
DISCLAIMER: This standard is governed by the "Texas Engineering Practice Act" and no warranty of any kind is made by TxDOT for any purpose whatsoever. All other formats are for incorrect results or omissions resulting from this use.

SECTION DIMENSIONS										REINFORCING (in ² /ft) ②								①
S	H	T ₁	T ₂	T ₃	T ₄	Fill Height	M	A _{S1}	A _{S2}	A _{S3}	A _{S4}	A _{S5}	A _{S6}	A _{S7}	A _{S8}	Light Weight (Tons)		
(ft)	(ft)	(in)	(in)	(in)	(in)	(ft)	(in)											
12	4	12	12	12	12	2	-	0.38	0.31	0.29	0.29	0.29	0.29	0.29	0.29	22.8		
12	4	12	12	12	12	2C3	73	0.44	0.37	0.30	0.29	-	-	-	-	22.8		
12	4	12	12	12	12	3-5	66	0.37	0.30	0.29	0.29	-	-	-	-	22.8		
12	4	12	12	12	12	10	66	0.44	0.34	0.35	0.29	-	-	-	-	22.8		
12	4	12	12	12	12	15	59	0.60	0.46	0.48	0.29	-	-	-	-	22.8		
12	4	12	12	12	12	20	59	0.78	0.60	0.61	0.29	-	-	-	-	22.8		
12	4	12	12	12	12	25	59	0.97	0.74	0.75	0.29	-	-	-	-	22.8		
12	6	12	12	12	12	2	-	0.32	0.36	0.32	0.29	0.29	0.29	0.29	0.29	25.2		
12	6	12	12	12	12	2C3	66	0.38	0.43	0.36	0.29	-	-	-	-	25.2		
12	6	12	12	12	12	3-5	59	0.32	0.36	0.33	0.29	-	-	-	-	25.2		
12	6	12	12	12	12	10	59	0.38	0.41	0.42	0.29	-	-	-	-	25.2		
12	6	12	12	12	12	15	53	0.51	0.55	0.57	0.29	-	-	-	-	25.2		
12	6	12	12	12	12	20	53	0.65	0.71	0.72	0.29	-	-	-	-	25.2		
12	6	12	12	12	12	25	53	0.81	0.87	0.89	0.29	-	-	-	-	25.2		
12	8	12	12	12	12	2	-	0.29	0.41	0.36	0.29	0.29	0.29	0.29	0.29	27.6		
12	8	12	12	12	12	2C3	66	0.33	0.49	0.42	0.29	-	-	-	-	27.6		
12	8	12	12	12	12	3-5	59	0.29	0.41	0.36	0.29	-	-	-	-	27.6		
12	8	12	12	12	12	10	59	0.34	0.46	0.46	0.29	-	-	-	-	27.6		
12	8	12	12	12	12	15	53	0.44	0.61	0.64	0.29	-	-	-	-	27.6		
12	8	12	12	12	12	20	53	0.57	0.78	0.81	0.29	-	-	-	-	27.6		
12	8	12	12	12	12	25	53	0.69	0.96	0.99	0.29	-	-	-	-	27.6		
12	10	12	12	12	12	2	-	0.29	0.45	0.43	0.29	0.29	0.29	0.29	0.29	30.0		
12	10	12	12	12	12	2C3	73	0.29	0.54	0.48	0.29	-	-	-	-	30.0		
12	10	12	12	12	12	3-5	66	0.29	0.45	0.43	0.29	-	-	-	-	30.0		
12	10	12	12	12	12	10	59	0.31	0.49	0.53	0.29	-	-	-	-	30.0		
12	10	12	12	12	12	15	53	0.40	0.65	0.70	0.29	-	-	-	-	30.0		
12	10	12	12	12	12	20	53	0.51	0.84	0.88	0.29	-	-	-	-	30.0		
12	10	12	12	12	12	25	53	0.62	1.03	1.07	0.29	-	-	-	-	30.0		
12	12	12	12	12	12	2	-	0.29	0.49	0.46	0.33	0.29	0.29	0.29	0.29	32.4		
12	12	12	12	12	12	2C3	93	0.29	0.59	0.53	0.29	-	-	-	-	32.4		
12	12	12	12	12	12	3-5	80	0.29	0.49	0.46	0.29	-	-	-	-	32.4		
12	12	12	12	12	12	10	73	0.29	0.52	0.56	0.29	-	-	-	-	32.4		
12	12	12	12	12	12	15	59	0.37	0.69	0.74	0.29	-	-	-	-	32.4		
12	12	12	12	12	12	20	59	0.46	0.87	0.93	0.29	-	-	-	-	32.4		

- ① For Box Length = 8'-0"
- ② A_{S1} thru A_{S4}, A_{S7} and A_{S6} are minimum required areas of reinforcement per linear foot of box length. A_{S5} and A_{S8} are minimum required areas of reinforcement per linear foot of box width.



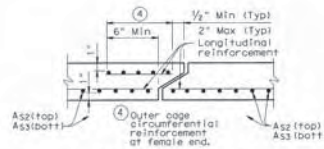
CORNER OPTION "A"



CORNER OPTION "B"

FILL HEIGHT 2 FT AND GREATER

FILL HEIGHT LESS THAN 2 FT



SECTION A-A

(TOP AND BOTTOM SLAB JOINT REINFORCEMENT)

GENERAL NOTES:
 Designs shown conform to ASTM C1577.
 Refer to ASTM C1577 for information or details not shown.
 All concrete shall be Class "H" Concrete with a minimum compressive strength of 5,000 psi.
 See SCP-10 standard sheet for miscellaneous details and notes not shown.
 In lieu of furnishing the designs shown on this sheet, the contractor may furnish an alternate design that is equal to or exceeds the box design for the design fill height in the table. Shop plans for alternate designs shall be submitted in accordance with item "Precast Concrete Structures".

HL93 LOADING

Texas Department of Transportation
 Bridge Division

SINGLE BOX CULVERTS
 PRECAST
 12'-0" SPAN

SCP-12

FILED	SC12(16).dgn	ON	GAJ	ON	LMB	ON	DMT/TJG/TJ	ON	GAJ
DATE	February 2010	DESIGNED		FEDERAL AID PROJECT		SHEET			
REVISIONS		CHECKED		DATE		BY		DATE	



TYPE 805
 NO. F-2942
 3131 BROADWAY, SUITE 200
 HOUSTON, TEXAS 77042
 PHONE (713) 822-1444
 FAX (713) 968-9333



SUPERVISED BY: LANDTECH
 P.E. NO. 45376

CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND
 SHEPHERD PARK (CENTRAL)
 DRAINAGE AND PAVING

SINGLE BOX CULVERTS
 PRECAST
 12'-0" SPAN

WBS NUMBER

M-000285-0001-4

DRAWING SCALE

NTS

CITY OF HOUSTON PM

JEFFREY T. HALL, P.E.

SHEET NO. 158 OF 385

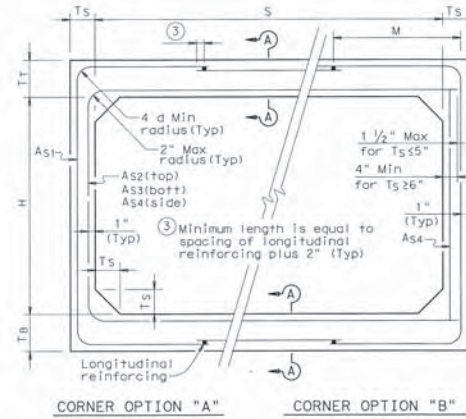


BOX DATA

SECTION DIMENSIONS					Fill Height (ft)	M (in)	REINFORCING (in ² /ft) ②								Lift Weight (Tons) ①
S (ft)	H (ft)	T _T (in)	T _B (in)	T _S (in)			A ₅₁	A ₅₂	A ₅₃	A ₅₄	A ₅₅	A ₅₆	A ₅₇	A ₅₈	
14	10	12	12	12	2-5	66	0.52	0.86	0.83	0.52	-	-	-	-	30.0

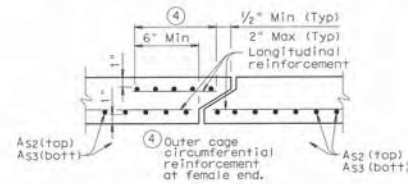
① For Box Length = 8'-0"

② A₅₁ thru A₅₄, A₅₇ and A₅₈ are minimum required areas of reinforcement per linear foot of box length. A₅₆ and A₅₅ are minimum required areas of reinforcement per linear foot of box width.



CORNER OPTION "A" CORNER OPTION "B"

FILL HEIGHT 2 FT AND GREATER



SECTION A-A

(TOP AND BOTTOM SLAB JOINT REINFORCEMENT)

GENERAL NOTES:

Designs shown conform to ASTM C1577. Refer to ASTM C1577 for information or details not shown.
 All concrete shall be Class "H" Concrete with a minimum compressive strength of 5,000 psi.
 See SCP-100 standard sheet for miscellaneous details and notes not shown.
 In lieu of furnishing the designs shown on this sheet, the contractor may furnish an alternate design that is equal to or exceeds the box design for the design fill height in the table. Shop plans for alternate designs shall be submitted in accordance with Item "Precast Concrete Structures".

HS20 LOADING



CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND
 SHEPHERD PARK (CENTRAL)
 DRAINAGE AND PAVING

PRECAST BOX CULVERT
 14'-0" SPAN

WBS NUMBER

M-000285-0001-4

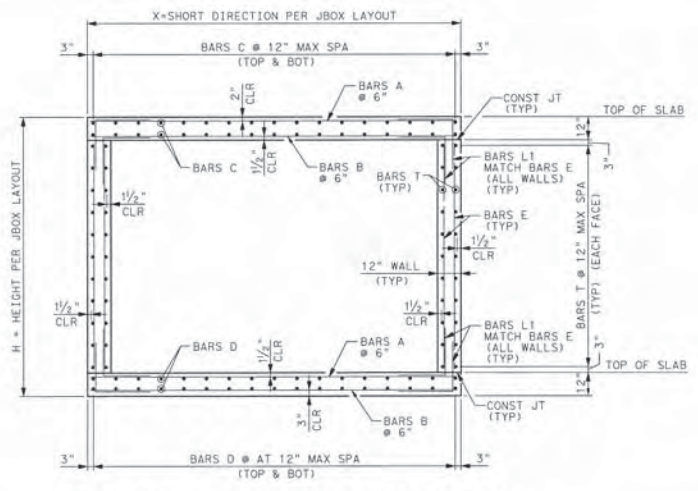
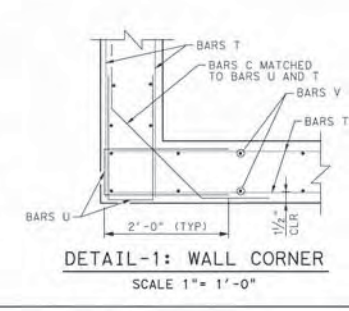
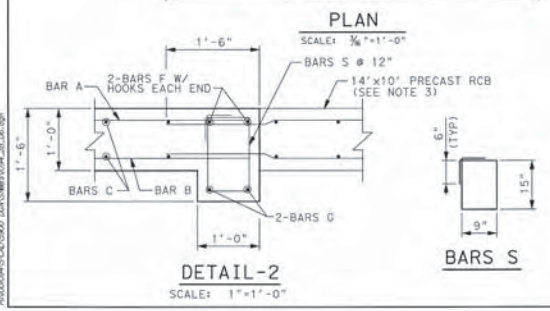
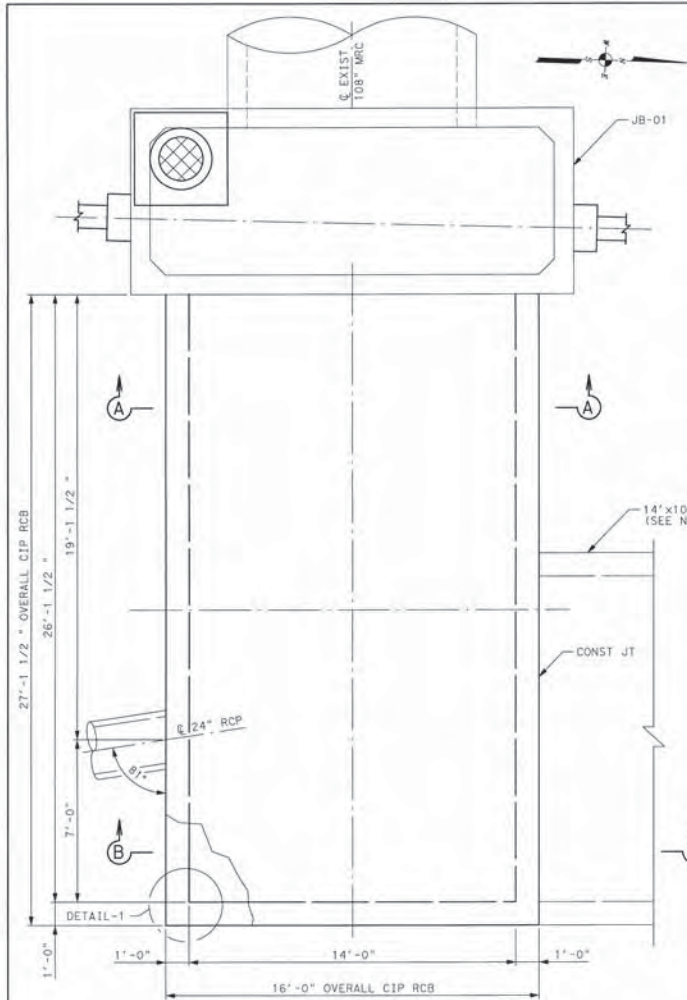
DRAWING SCALE

55630

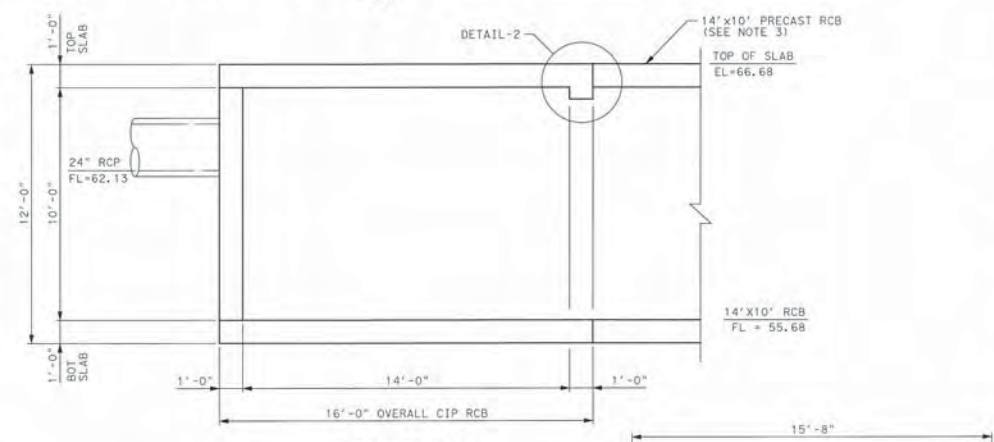
CITY OF HOUSTON PM

JEFFREY T. MALL, P.E.

SHEET NO. 159 OF 385



SECTION A-A: TYPICAL SLAB/WALL SECTION
NTS



SECTION B-B
SCALE: 3/8" = 1'-0"

NOTES:

1. CONCRETE SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3600 psi.
2. REINFORCING STEEL SHALL HAVE A MINIMUM YIELD STRENGTH OF 60 ksi. DIMENSIONS ARE TO THE CENTERLINE OF BAR UNLESS OTHERWISE NOTED. SUBMIT SHOP DRAWINGS FOR EACH JUNCTION BOX TO BE APPROVED BY THE ENGINEER.
3. EXTEND PRECAST BOX REINFORCING 1'-6" INTO CIP RCB, TOP SLAB, BOTTOM SLAB AND WALLS.

BAR TABLE	
BARS	SIZE
A	#6
B	#6
C	#4
D	#4
E	#5
F	#5
G	#5
L1	#5
L2	#4
S	#4
T	#4
U	#4



SUPERVISED BY: LANGTECH FOR NO. P-05576

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

CAST-IN-PLACE RCB

WBS NUMBER
M-000285-0001-4
DRAWING SCALE
AS NOTED
CITY OF HOUSTON PM
JEFFREY T. HALL, P.E.
SHEET NO. 159A OF 385



DATE: 1/16/2016 10:58:06 AM PLOTTING: C:\COURT\DWG\2016\10\16\101510.DWG

STORM WATER POLLUTION PREVENTION PLAN NOTES

I. EROSION AND SEDIMENTATION CONTROLS

A. STABILIZATION PRACTICES:

HYDRO-MULCH SEEDING AND SODDING OF UNPAVED DISTURBED AREAS.

B. STRUCTURAL PRACTICES:

USE FILTER FABRIC FENCE ALONG THE PROJECT RIGHT-OF-WAY CLOSE TO THE CONSTRUCTION AREA. FILTER FABRIC FENCE SHALL BE AS LONG AS THE CONSTRUCTION DISTANCE ALONG R.O.W., AND AT LEAST 50 FEET BEYOND THE POINT OF DISTURBANCES WHERE POSSIBLE.

THE CONTRACTOR SHALL INSTALL THE FILTER FABRIC FENCE IN THE DISTURBED AREAS AS NEEDED, ACCORDING TO THE PROPOSED CONSTRUCTION SEQUENCE PLANS. SEE THE TCP PLANS FOR CONSTRUCTION SEQUENCE/PHASING.

USE INLET PROTECTION BARRIERS NEAR THE CONSTRUCTION AREA FOR INLETS POTENTIALLY CONTAMINATED BY FLOW FROM CONSTRUCTION. THE CONTRACTOR MUST ENSURE THAT THE BARRIERS DO NOT CAUSE ANY TRAFFIC HAZARDS.

C. OFF-SITE VEHICLE TRACKING:

THE CONTRACTOR SHALL MINIMIZE OFF-SITE TRACKING OF SEDIMENTS. SEDIMENTS TRACKED OFF-SITE SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR AT NO COST TO THE OWNER.

SPRINKLING WILL BE USED TO CONTROL DUST AS NECESSARY.

II. OTHER CONTROLS AND MAINTENANCE

A. WASTE DISPOSAL:

WASTE MATERIALS: ALL WASTE MATERIALS WILL BE COLLECTED AND STORED IN SECURELY LIDDED METAL DUMPSTERS. THE DUMPSTERS WILL MEET ALL LOCAL AND STATE SOLID WASTE MANAGEMENT REGULATIONS. ALL TRASH AND DEBRIS WILL BE HAULED TO AN APPROVED LANDFILL. NO CONSTRUCTION WASTE MATERIAL WILL BE BURIED ON SITE OR BURNT. ALL PERSONNEL WILL BE INSTRUCTED REGARDING THE CORRECT PROCEDURE FOR WASTE DISPOSAL.

HAZARDOUS WASTE: NO HAZARDOUS WASTE IS EXPECTED TO BE GENERATED OR ENCOUNTERED IN THIS PROJECT. IN THE EVENT THAT HAZARDOUS WASTE IS ENCOUNTERED, ALL HAZARDOUS WASTE MATERIAL WILL BE DISPOSED OF IN THE MANNER SPECIFIED BY THE LOCAL OR STATE REGULATIONS OR AS DIRECTED BY THE CITY ENGINEER.

SANITARY WASTE: ALL SANITARY WASTE WILL BE REGULARLY COLLECTED FROM THE PORTABLE UNITS, IF REQUIRED, BY A LICENSED SANITARY WASTE MANAGEMENT CONTRACTOR.

B. DEMONSTRATION OF COMPLIANCE WITH STATE OR LOCAL REGULATIONS/LAWS:

THE PROPOSED PROJECT WILL BE IN COMPLIANCE WITH ALL APPLICABLE STATE AND LOCAL WASTE DISPOSAL AND SANITARY SEWER REGULATIONS.

C. MAINTENANCE:

HYDRO-MULCH DISTURBED AREAS BETWEEN THE PROPERTY LINE AND THE GUTTER AS SOON AS POSSIBLE, PER THE APPLICABLE SPECIFICATIONS.

REMOVE IMMEDIATELY TRENCH EXCAVATION SOILS OR BACKFILL IN CONTINUOUS OPERATIONS.

REMOVE SEDIMENT FROM BEHIND THE REINFORCED FILTER FABRIC BARRIERS OR OTHER DEVICES WHEN IT BECOMES ABOUT 1/3 HEIGHT OF THE DEVICES.

REMOVE ANY SEDIMENTS THAT ACCUMULATE IN THE STORM SEWER INLETS.

REMOVE ALL TEMPORARY CONTROLS AFTER THE DISTURBED AREAS HAVE BEEN STABILIZED WITH PERMANENT CONTROLS.

SWPPP CONSTRUCTION NOTES

1. CONTRACTOR SHALL IMPLEMENT INLET PROTECTION DEVICES AND REINFORCED FILTER FABRIC BARRIER ALONG ROAD AND SIDE DITCHES AT LOCATIONS SHOWN ON THE TYPICAL STORM WATER POLLUTION PREVENTION (SWPPP) PLANS TO KEEP SILT AND OR EXCAVATED MATERIALS FROM ENTERING INTO THE STORM WATER INLETS AND DITCHES EVENTUALLY POLLUTING THE RECEIVING STORM.

2. DURING THE EXCAVATION PHASE OF THE PROJECT, CONTRACTOR SHALL SCHEDULE THE WORK IN SHORT SEGMENTS SO THAT EXCAVATION MATERIAL CAN BE QUICKLY HAULED AWAY FROM THE SITE AND TO PREVENT IT FROM STAYING UNCOLLECTED ON THE EXISTING PAVEMENT. ANY LOOSE EXCAVATED MATERIAL WHICH FALLS ON PAVEMENTS OR DRIVEWAYS SHALL BE SWEEPED BACK INTO THE EXCAVATED AREA.

3. CONTRACTOR SHALL CLEAN UP THE EXISTING STREET INTERSECTIONS AND DRIVEWAYS DAILY, AS NECESSARY, TO REMOVE ANY EXCESS MUD, SILT OR ROCK TRACKED FROM THE EXCAVATED AREA.

4. CONTRACTOR SHALL FOLLOW GOOD HOUSEKEEPING PRACTICES DURING THE CONSTRUCTION OF THE PROJECT, ALWAYS CLEANING UP DIRT AND LOOSE MATERIAL AS CONSTRUCTION PROGRESSES.

5. CONTRACTOR TO INSPECT AND MAINTAIN THE AREAS LISTED BELOW AT LEAST ONCE EVERY FOURTEEN(14) CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A STORM EVENT OF 0.5 INCHES OR GREATER.

- DISTURBED AREAS OF THE CONSTRUCTION SITE THAT HAVE NOT BEEN FINALLY STABILIZED.
- AREAS USED FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION.
- STRUCTURAL CONTROL MEASURES.
- LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE.

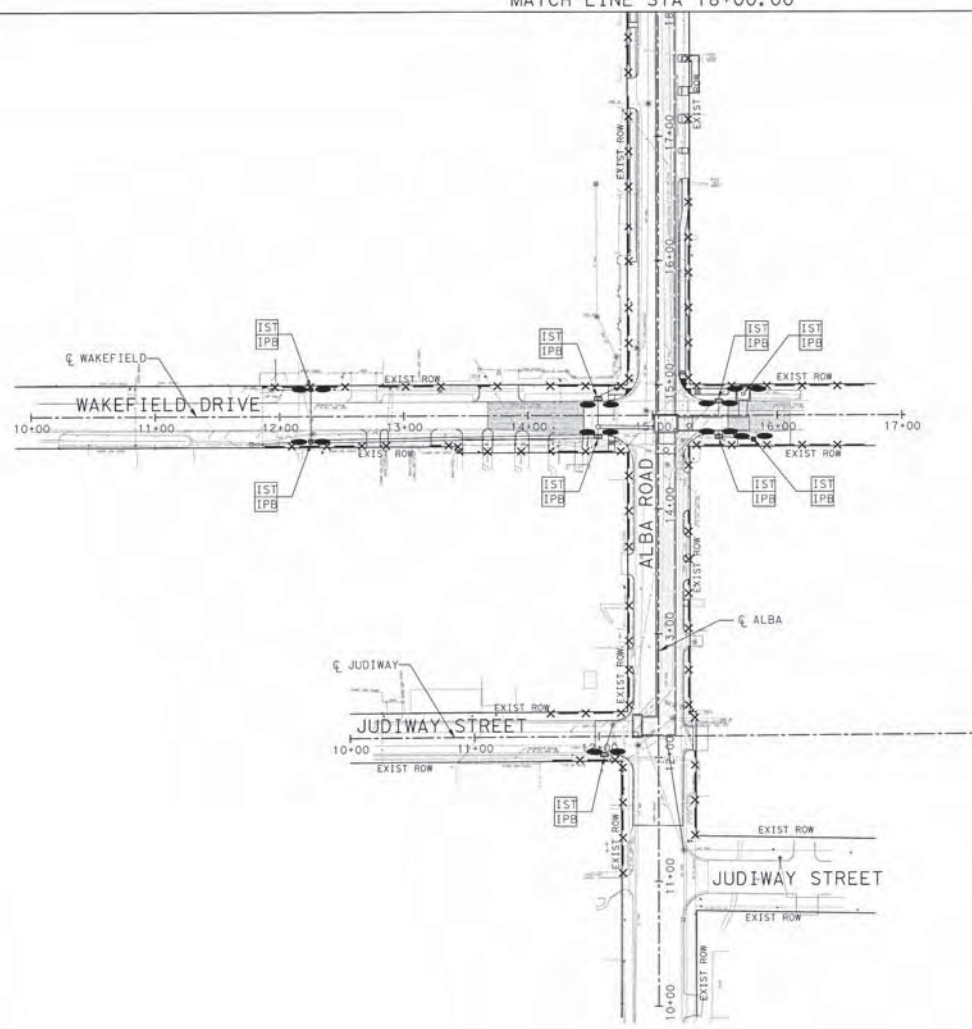
6. CONTRACTOR TO BE RESPONSIBLE TO MAINTAIN EXISTING DITCHES AND OR CULVERTS FOR UNOBSTRUCTED DRAINAGE AT ALL TIMES. WHERE SODDING IS DISTURBED BY EXCAVATION OR BACKFILLING OPERATIONS, SUCH AREAS SHALL BE REPLACED BY SEEDING OR SODDING. SLOPES 4:1 OR STEEPER SHALL BE REPLACED BY BLOCK SODDING.

DATE: 9/20/05
 DRAWING NO: 55630
 DRAWING TITLE: STORM WATER POLLUTION PREVENTION PLAN NOTES

 <p>SDPS Houston Storm Drainage Program Support</p>	
 <p>PGAL TYPE REC. NO. F-2742 3131 BROADWAY, SUITE 200 HOUSTON, TEXAS 77042 PHONE (713) 822-1444 FAX (713) 969-9233</p>	 <p>CITY OF HOUSTON DEPARTMENT OF PUBLIC WORKS AND ENGINEERING</p>
<p>SUPPLIED BY: LANDTECH PB NO. 0-0516</p>	
<p>CITY OF HOUSTON DEPARTMENT OF PUBLIC WORKS AND ENGINEERING</p>	
<p>GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING</p>	
<p>STORM WATER POLLUTION PREVENTION PLAN NOTES</p>	
<p>SHEET 1 OF 1</p>	
<p>WBS NUMBER M-000285-0001-4</p>	 <p>1"=50'</p>
<p>DRAWING SCALE</p>	<p>55630</p>
<p>CITY OF HOUSTON PM JEFFREY T. HALL, P.E.</p>	<p>SHEET NO. 160 OF 385</p>

DATE: 9/20/2025 7:04:41 AM
 P:\000095\G20\000_2025\CON\CON_Ans_3870.dwg

MATCH LINE STA 18+00.00



1. FOR STANDARD DETAILS, SEE STORM WATER POLLUTION PREVENTION PLAN DETAILS.
2. CONTRACTOR SHALL PROVIDE A STABILIZED CONSTRUCTION EXIT/ENTRANCE, INCLUDING TRUCK WASHING AREA, VERIFIED IN THE FIELD AND AUTHORIZED BY THE CITY ENGINEER.

LEGEND:

- IST INLET SEDIMENT TRAP
- IPB INLET PROTECTION BARRIER
- X —> FILTER FABRIC FENCE
- BAGGED GRAVEL BARRIER



PGAL
 3131 BIRMGHAM, SUITE 200
 HOUSTON, TEXAS 77042
 PHONE (713) 822-1444
 FAX (713) 968-9333



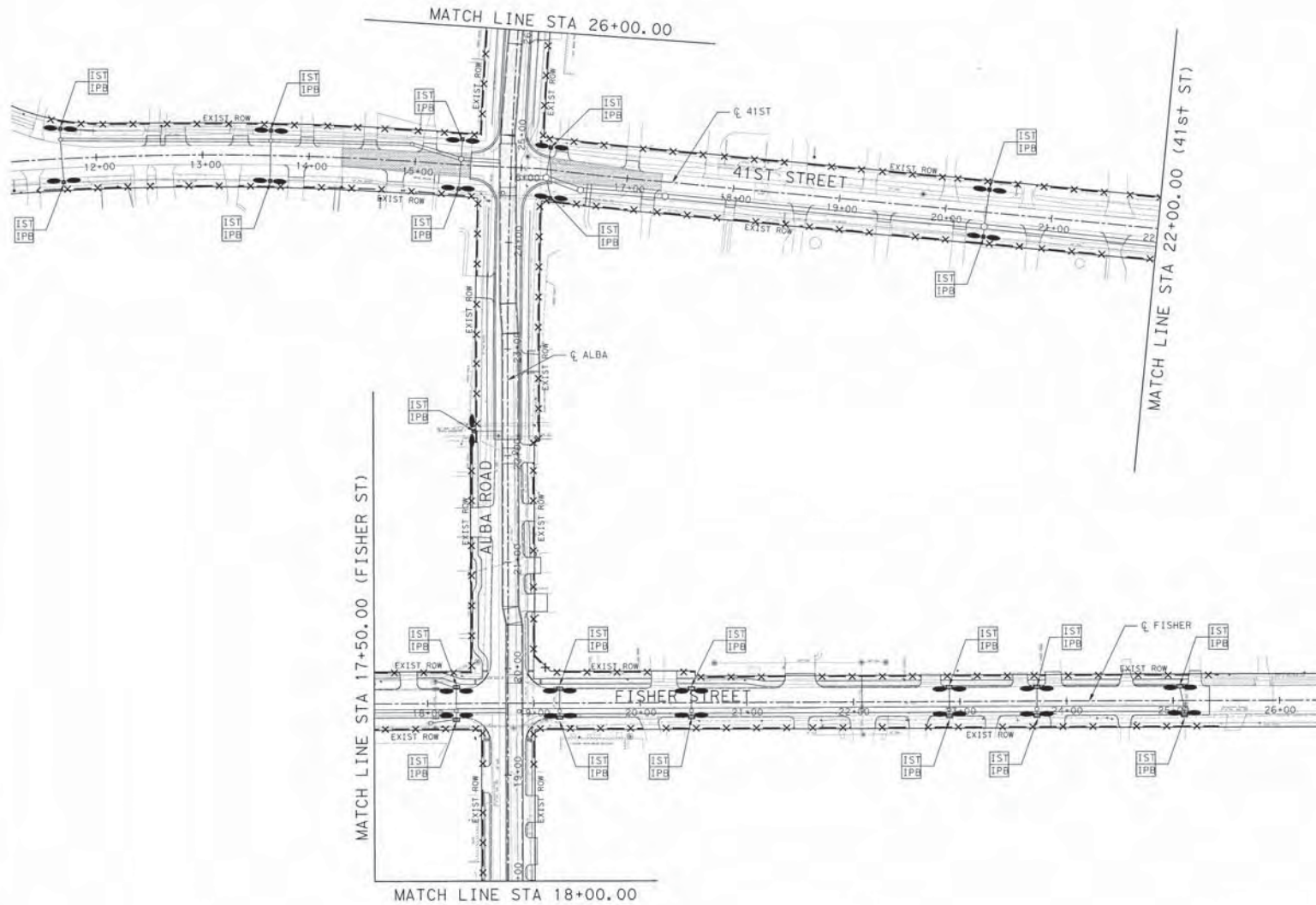
SURVEYED BY: LANDTECH P-5576

CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
 GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING
 STORM WATER POLLUTION PREVENTION PLAN
 ALBA ROAD
 BEGIN STA TO STA 18+00

WBS NUMBER
 M-000285-0001-4
 DRAWING SCALE
 1"=50'
 CITY OF HOUSTON PM
 JEFFREY T. HALL, P.E.
 SHEET NO. 161 OF 385



DATE: 9/20/2005 7:04:48 AM
 P:\00000000\000000\DWG\Cover\CPM_Ans_28P101.dwg



NOTES:

1. FOR STANDARD DETAILS, SEE STORM WATER POLLUTION PREVENTION PLAN DETAILS.
2. CONTRACTOR SHALL PROVIDE A STABILIZED CONSTRUCTION EXIT/ENTRANCE, INCLUDING TRUCK WASHING AREA, VERIFIED IN THE FIELD AND AUTHORIZED BY THE CITY ENGINEER.

LEGEND:

- IST INLET SEDIMENT TRAP
- IPB INLET PROTECTION BARRIER
- X —> FILTER FABRIC FENCE
- BAGGED GRAVEL BARRIER



SDPS
Houston Storm Drainage
Program Support

PGAL
TYPE 905
 NO. T-2762
 3131 BRADPARK, SUITE 200
 HOUSTON, TEXAS 77042
 PHONE (713) 852-1444
 FAX (713) 968-9333

CITY OF HOUSTON
 COSTAS E. GERBERDTY
 54255
 JEFFREY T. HALL, P.E.
 10/10/05

CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

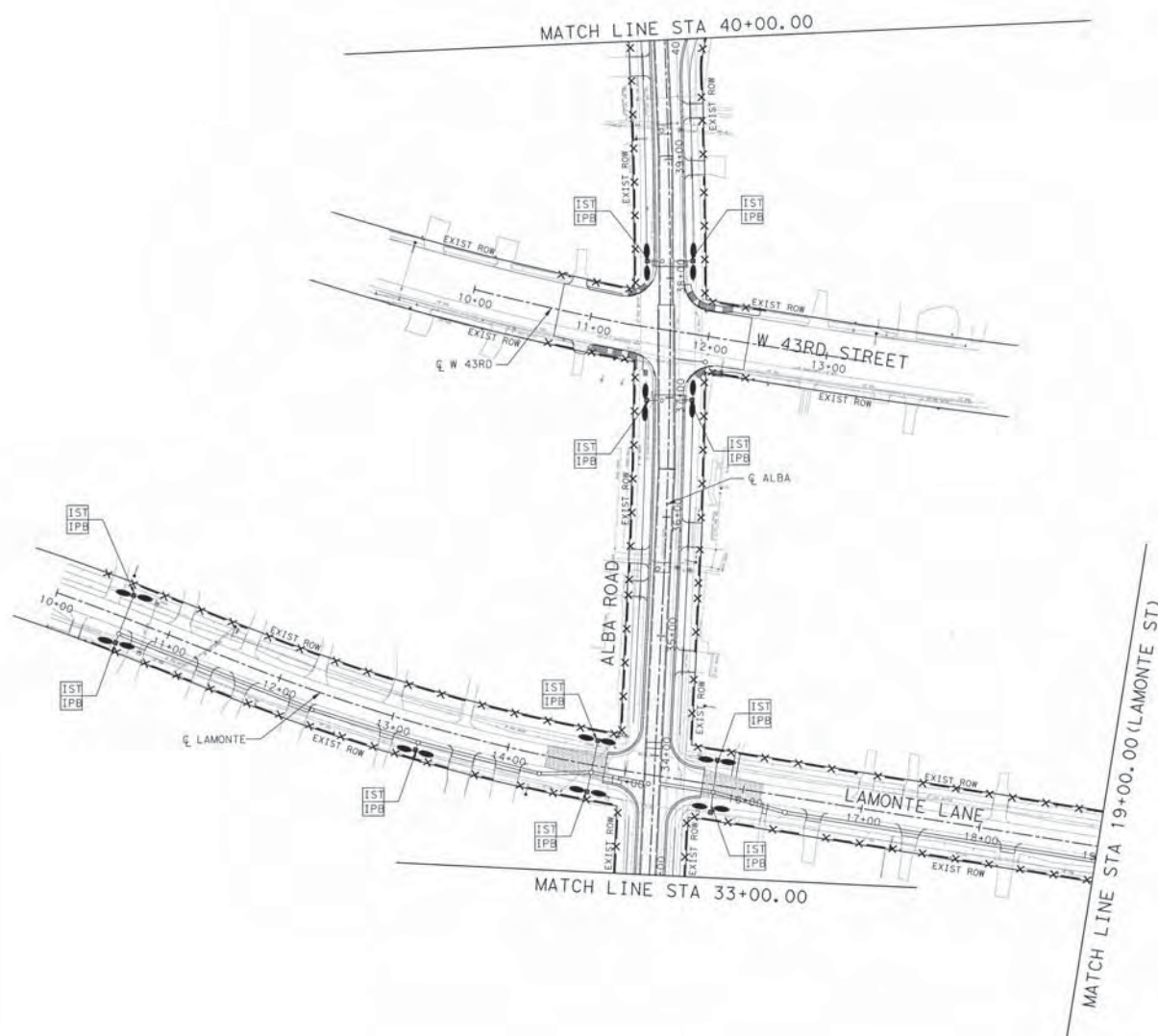
GARDEN OAKS AND
 SHEPHERD PARK (CENTRAL)
 DRAINAGE AND PAVING

**STORM WATER POLLUTION
 PREVENTION PLAN
 ALBERCA ROAD
 STA 18+00 TO STA 26+00**

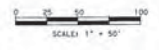
WBS NUMBER	M-000285-0001-4
DRAWING SCALE	1"=50'
CITY OF HOUSTON PW	55630
SURVEYED BY: LANDTECH PW NO.: P-9578	JEFFREY T. HALL, P.E. SHEET NO. 162 OF 395

DATE: 9/30/2005 7:04:25 AM
 A:\00009145-020\0001_D00\Storm\DRN_PLAN_389.Plot.dgn

NO.	DATE	REVISION



- NOTES:**
- FOR STANDARD DETAILS, SEE STORM WATER POLLUTION PREVENTION PLAN DETAILS.
 - CONTRACTOR SHALL PROVIDE A STABILIZED CONSTRUCTION EXIT/ENTRANCE, INCLUDING TRUCK WASHING AREA, VERIFIED IN THE FIELD AND AUTHORIZED BY THE CITY ENGINEER.
- LEGEND:**
- IST INLET SEDIMENT TRAP
 - IPB INLET PROTECTION BARRIER
 - X —> FILTER FABRIC FENCE
 - BAGGED GRAVEL BARRIER



SDPS
Houston Storm Drainage
Program Support

PGAL
INC. 1952
 NO. T-274
 3131 BRANNFARM, SUITE 200
 HOUSTON, TEXAS 77042
 PHONE (713) 852-1444
 FAX (713) 988-9333

SURVEYED BY: LANDTECH P-55176
 FB NO.:

CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND
 SHEPHERD PARK (CENTRAL)
 DRAINAGE AND PAVING

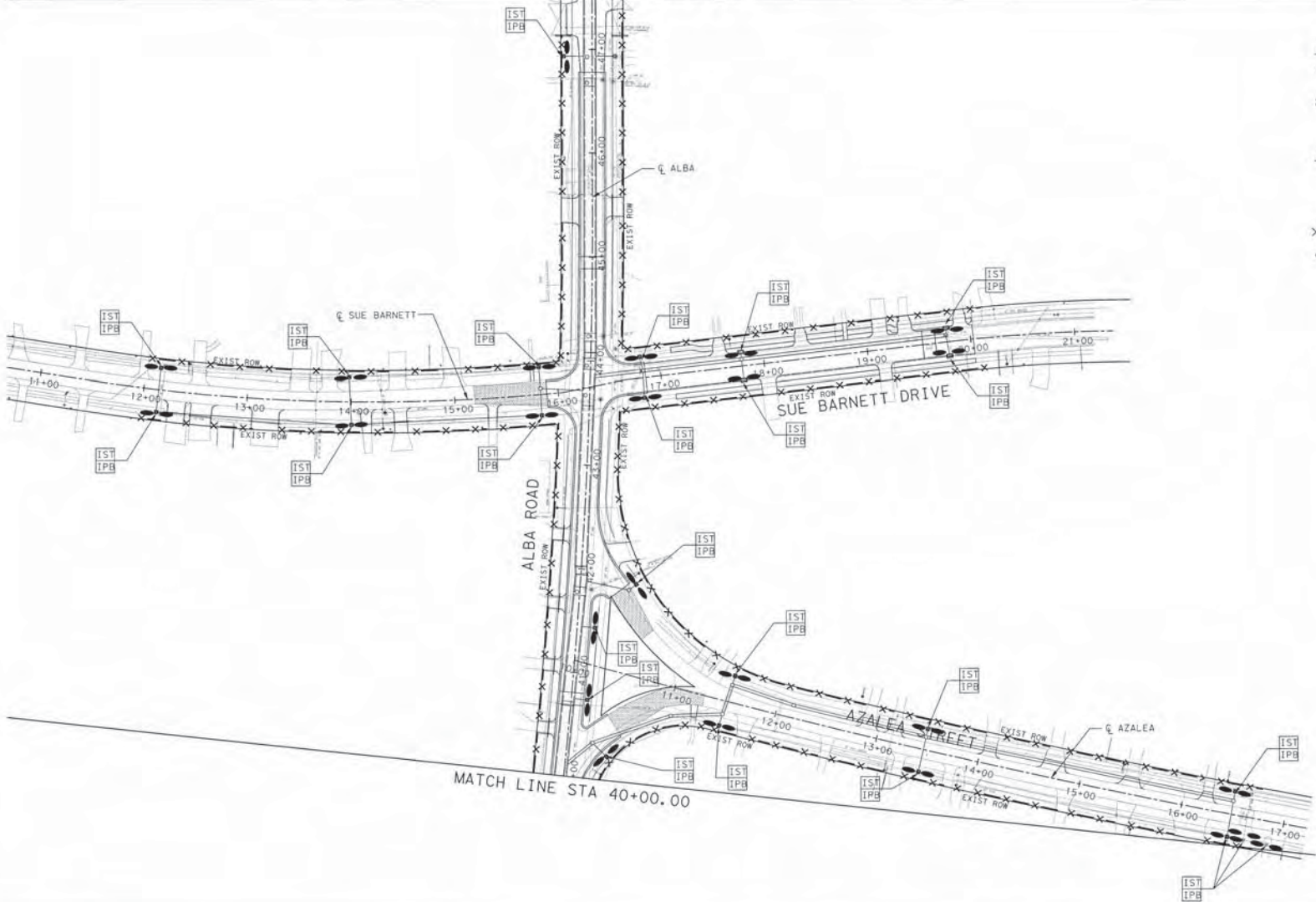
STORM WATER POLLUTION
 PREVENTION PLAN
 ALBA ROAD
 STA 33+00 TO STA 40+00

WBS NUMBER	M-000285-0001-4
DRAWING SCALE	1"=50'
CITY OF HOUSTON PW	JEFFREY T. HALL, P.E.
SHEET NO.	164 OF 385

DATE	NO.	SCALE



MATCH LINE STA 47+50.00



MATCH LINE STA 40+00.00

NOTES:

1. FOR STANDARD DETAILS, SEE STORM WATER POLLUTION PREVENTION PLAN DETAILS.
2. CONTRACTOR SHALL PROVIDE A STABILIZED CONSTRUCTION EXIT/ENTRANCE, INCLUDING TRUCK WASHING AREA, VERIFIED IN THE FIELD AND AUTHORIZED BY THE CITY ENGINEER.

LEGEND:

- IST INLET SEDIMENT TRAP
- IPB INLET PROTECTION BARRIER
- X → FILTER FABRIC FENCE
- BAGGED GRAVEL BARRIER



PGAL
 TYPE 905
 NO. 7-2742
 3131 BRADSHAW, SUITE 200
 HOUSTON, TEXAS 77042
 PHONE (713) 622-1444
 FAX (713) 968-9333



SURVEYED BY: LANDTECH
 P.E. NO. 49-0076

CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

STORM WATER POLLUTION PREVENTION PLAN
 ALBA ROAD
 STA 40+00 TO STA 47+50

WBS NUMBER

M-000285-0001-4

DRAWING SCALE

1"=50'

CITY OF HOUSTON PM

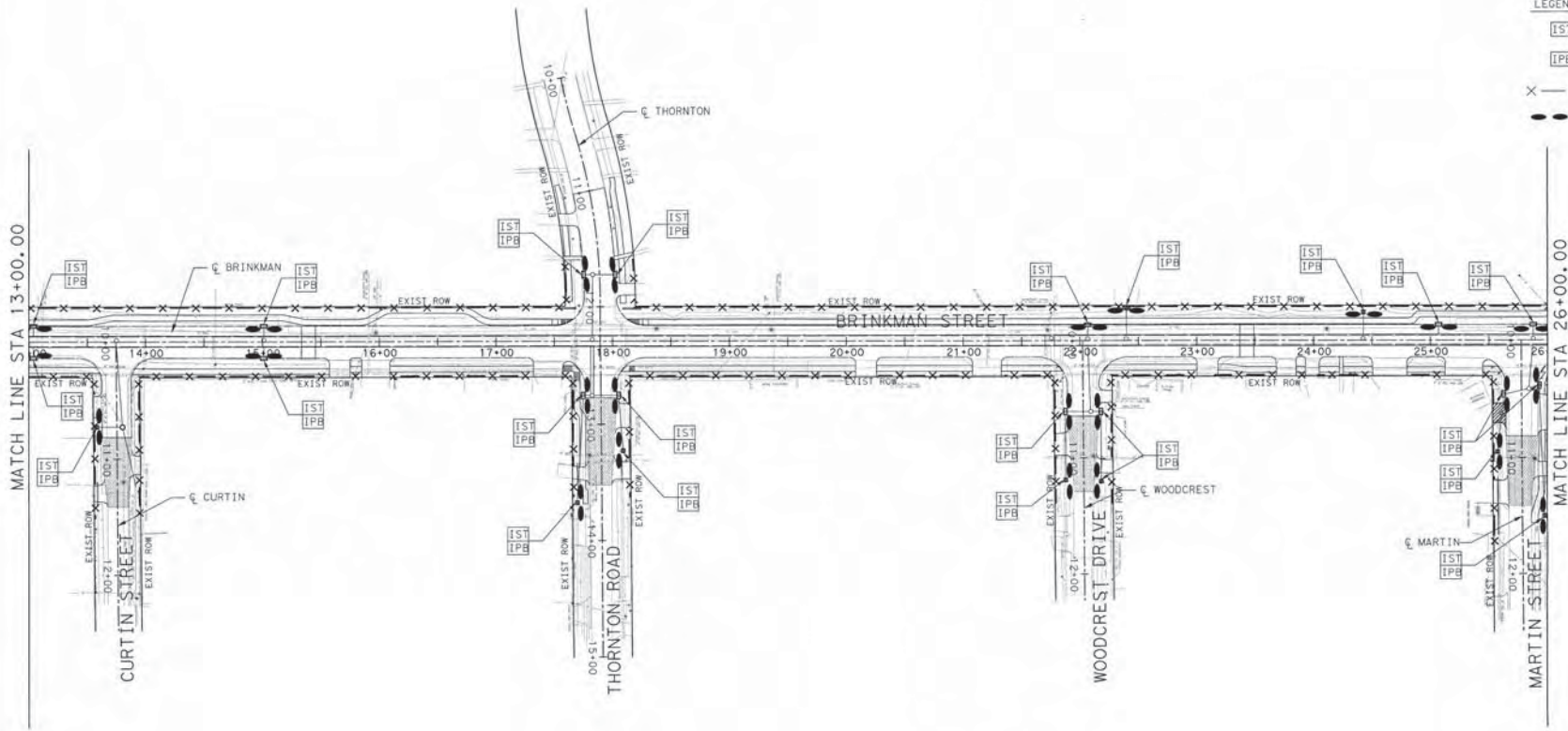
JEFFREY T. HALL, P.E.

SHEET NO. 165 OF 385



DATE: 9/20/2005 7:04:51 AM
 P:\0000045\040000\DWG\0001\DWG_385P05.dwg

DATE: 9/20/2005 TONKAT AM
 RW:0000945-CAC0000_DRAINAGE05M_DWG_01P05.dwg



NOTES:

1. FOR STANDARD DETAILS, SEE STORM WATER POLLUTION PREVENTION PLAN DETAILS.
2. CONTRACTOR SHALL PROVIDE A STABILIZED CONSTRUCTION EXIT/ENTRANCE, INCLUDING TRUCK WASHING AREA, VERIFIED IN THE FIELD AND AUTHORIZED BY THE CITY ENGINEER.

LEGEND:

- IST INLET SEDIMENT TRAP
- IPB INLET PROTECTION BARRIER
- X — FILTER FABRIC FENCE
- BAGGED GRAVEL BARRIER



PGAL
 TYPE: REG.
 NO. T-2742

3131 BIRMAPARK, SUITE 200
 HOUSTON, TEXAS 77042
 PHONE: (713) 620-1444
 FAX: (713) 968-9333

SUPPLIED BY: LANGTECH
 FR NO.: P-5516



CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND
 SHEPHERD PARK (CENTRAL)
 DRAINAGE AND PAVING

STORM WATER POLLUTION
 PREVENTION PLAN
 BRINKMAN ST
 STA 13+00 TO STA 26+00

WBS NUMBER

M-000285-0001-4

DRAWING SCALE

1"=50'

CITY OF HOUSTON FM

JEFFREY T. HALL, P.E.

SHEET NO. 167 OF 385

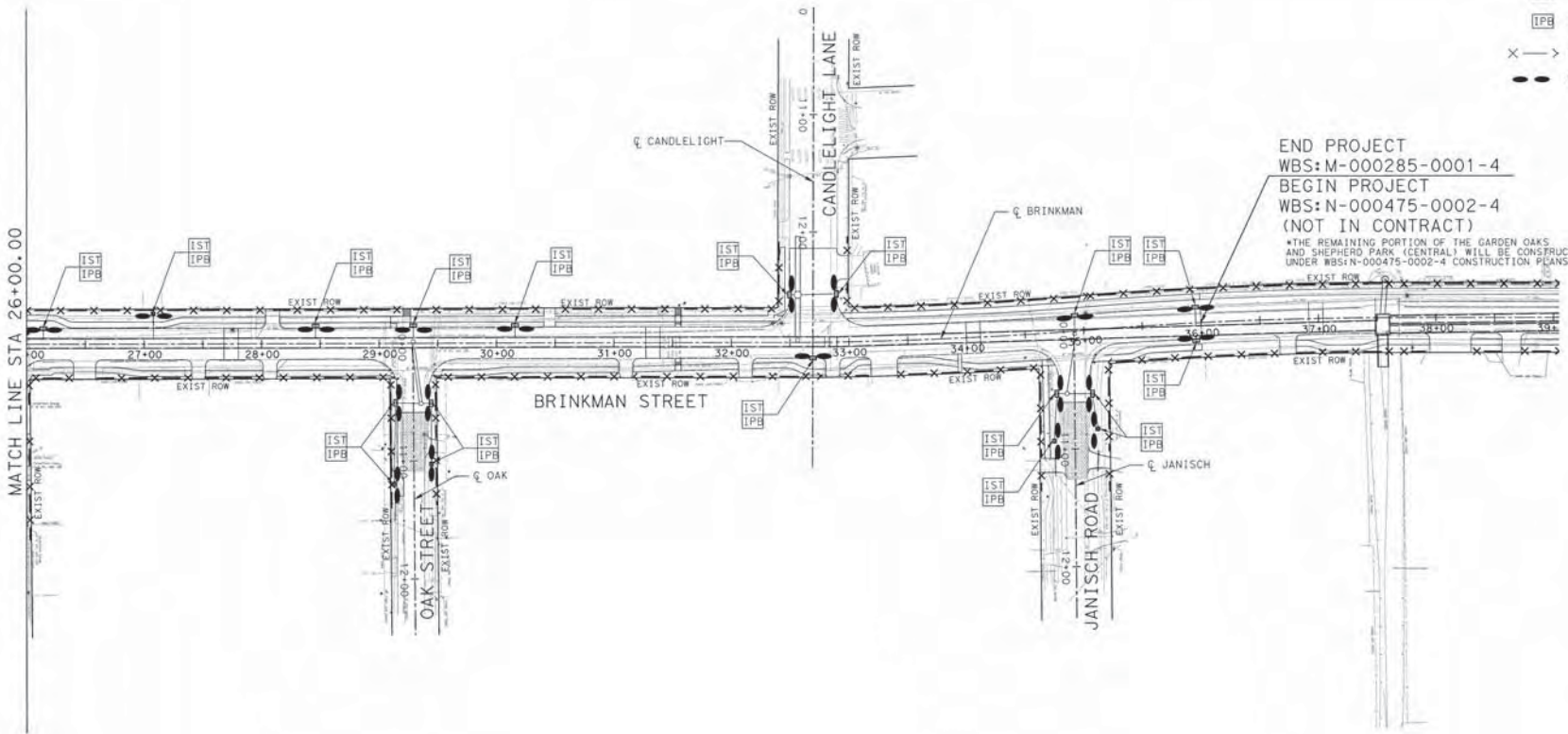


DATE	9/20/2005
BY	70448.M
CHECKED	AV0009AS-CJ/0002
DESIGNED	DD030004/04/01/00
PROJECT	STATION 26+00 TO 38+00
SHEET	168 OF 385




- NOTES:**
- FOR STANDARD DETAILS, SEE STORM WATER POLLUTION PREVENTION PLAN DETAILS.
 - CONTRACTOR SHALL PROVIDE A STABILIZED CONSTRUCTION EXIT/ENTRANCE, INCLUDING TRUCK WASHING AREA, VERIFIED IN THE FIELD AND AUTHORIZED BY THE CITY ENGINEER.

- LEGEND:**
- IST INLET SEDIMENT TRAP
 - IPB INLET PROTECTION BARRIER
 - X —> FILTER FABRIC FENCE
 - ● BAGGED GRAVEL BARRIER




END PROJECT
WBS: M-000285-0001-4
BEGIN PROJECT
WBS: N-000475-0002-4
(NOT IN CONTRACT)

*THE REMAINING PORTION OF THE GARDEN OAKS AND SHEPHERD PARK (CENTRAL) WILL BE CONSTRUCTED UNDER WBS: N-000475-0002-4 CONSTRUCTION PLANS

PGAL
TYPE 805
NO. P-2952
3131 BRIMMORIAN, SUITE 200
HOUSTON, TEXAS 77042
PHONE (713) 622-1444
FAX (713) 968-9333



CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING


STORM WATER POLLUTION PREVENTION PLAN
BRINKMAN ST
STA 26+00 TO END

WBS NUMBER
M-000285-0001-4

DRAWING SCALE
1"=50'

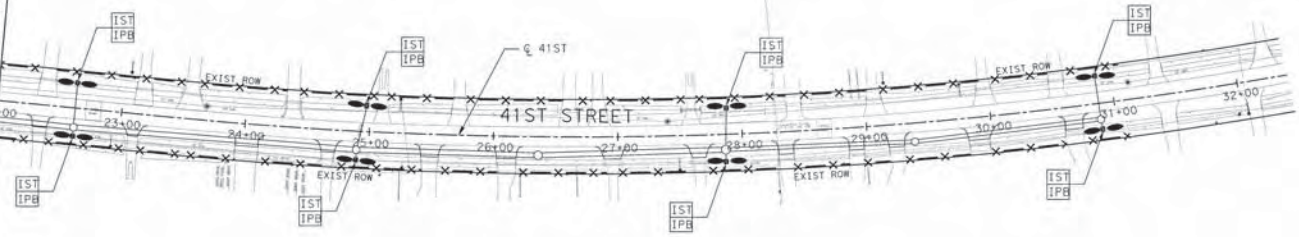
CITY OF HOUSTON PM
JEFFREY T. HALL, P.E.

SHEET NO. 168 OF 385



DATE: 9/20/2005 7:04:48 AM
AV0009AS-CJ/0002 DD030004/04/01/00

MATCH LINE STA 22+00.00 (41st ST)



NOTES:

1. FOR STANDARD DETAILS, SEE STORM WATER POLLUTION PREVENTION PLAN DETAILS.
2. CONTRACTOR SHALL PROVIDE A STABILIZED CONSTRUCTION EXIT/ENTRANCE, INCLUDING TRUCK WASHING AREA, VERIFIED IN THE FIELD AND AUTHORIZED BY THE CITY ENGINEER.

LEGEND:

- IST INLET SEDIMENT TRAP
- IPB INLET PROTECTION BARRIER
- X —> FILTER FABRIC FENCE
- BAGGED GRAVEL BARRIER



DATE: 04/20/2015 TIME: 10:48 AM PROJECT: 1502850000 D:\projects\150285\150285.dwg



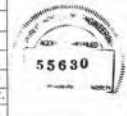
PGAL
INC. # 2562
 3131 BRANFARK, SUITE 200
 HOUSTON, TEXAS 77042
 PHONE (713) 852-1444
 FAX (713) 960-8333



CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING
 STORM WATER POLLUTION PREVENTION PLAN
 41ST STREET
 STA 22+00 TO END

WDS NUMBER
 M-000285-0001-4
 DRAWING SCALE
 1"=50'
 CITY OF HOUSTON PM
 JEFFREY T. HALL, P.E.
 SHEET NO. 170 OF 385



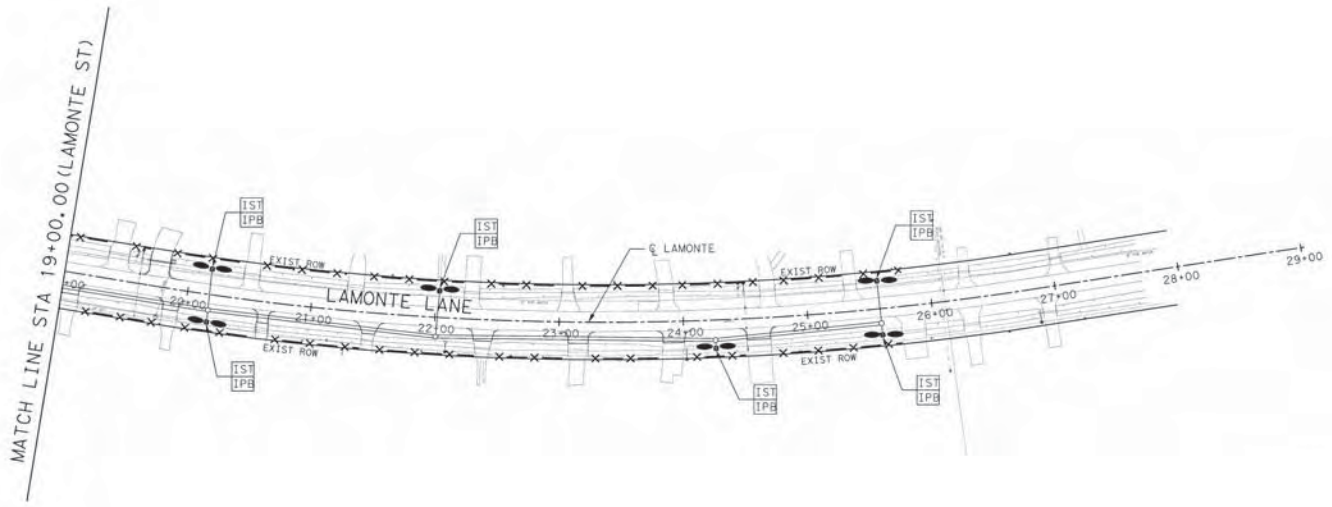


NOTES:

1. FOR STANDARD DETAILS, SEE STORM WATER POLLUTION PREVENTION PLAN DETAILS.
2. CONTRACTOR SHALL PROVIDE A STABILIZED CONSTRUCTION EXIT/ENTRANCE, INCLUDING TRUCK WASHING AREA, VERIFIED IN THE FIELD AND AUTHORIZED BY THE CITY ENGINEER.

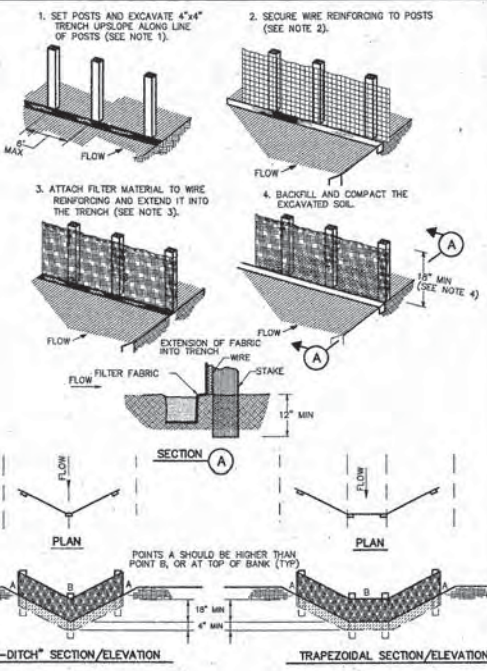
LEGEND:

- IST INLET SEDIMENT TRAP
- IPB INLET PROTECTION BARRIER
- X —> FILTER FABRIC FENCE
- BAGGED GRAVEL BARRIER



DATE: 9/20/2005 7:04:52 AM
 P:\0000045-00000000_DRAIN\Drawings\DRM_Lamonte_SDPD.dwg

								
 <small>TYPE INC. NO. P-252 2131 BRIDGEMARK, SUITE 200 HOUSTON, TEXAS 77042 PHONE (713) 622-1444 FAX (713) 668-9333</small>	 <small>SURVEYED BY: LANDTECH P-5976</small>							
CITY OF HOUSTON DEPARTMENT OF PUBLIC WORKS AND ENGINEERING GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING								
STORM WATER POLLUTION PREVENTION PLAN LAMONTE LANE STA 19+00 TO END								
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="font-size: small;">WBS NUMBER</td></tr> <tr><td>M-000285-0001-4</td></tr> <tr><td style="font-size: small;">DRAWING SCALE</td></tr> <tr><td>1"=50'</td></tr> <tr><td style="font-size: small;">CITY OF HOUSTON PM</td></tr> <tr><td>JEFFREY T. HALL, P. E.</td></tr> <tr><td style="font-size: small;">SHEET NO. 171 OF 385</td></tr> </table>	WBS NUMBER	M-000285-0001-4	DRAWING SCALE	1"=50'	CITY OF HOUSTON PM	JEFFREY T. HALL, P. E.	SHEET NO. 171 OF 385	
WBS NUMBER								
M-000285-0001-4								
DRAWING SCALE								
1"=50'								
CITY OF HOUSTON PM								
JEFFREY T. HALL, P. E.								
SHEET NO. 171 OF 385								

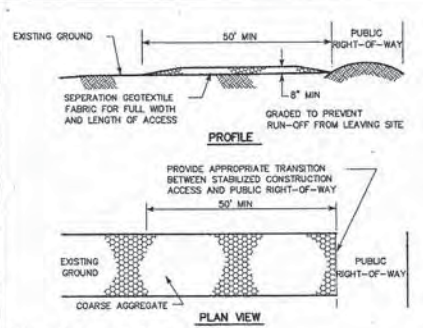
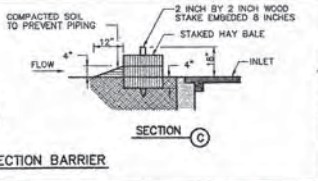
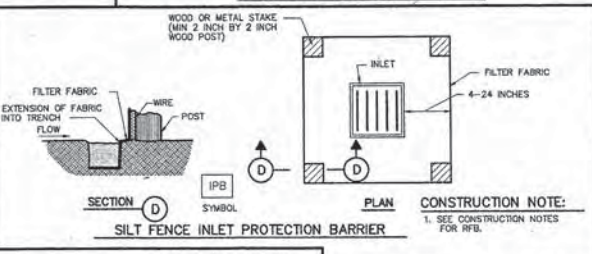
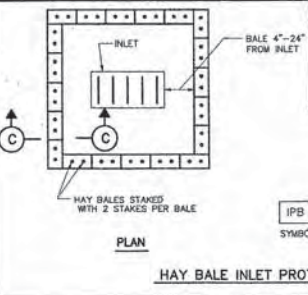
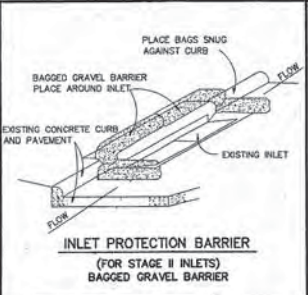
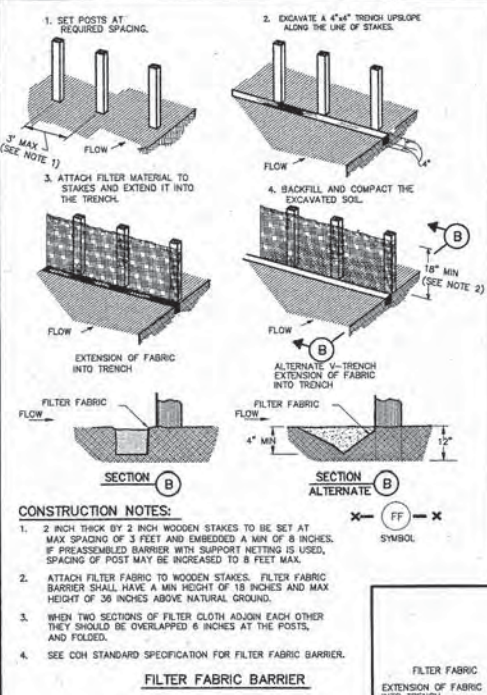


CONSTRUCTION NOTES:

1. SET 2 INCH BY 2 INCH WOODEN STAKES SPACED A MAX OF 6 FEET APART AND EMBEDDED A MIN OF 12 INCHES.
2. WOVEN WIRE REINFORCING TO BE FASTENED SECURELY TO BARRIER POSTS WITH STAPLES.
3. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE REINFORCING WITH TIES SPACED EVERY 24 INCHES AT TOP AND MIDSECTION.
4. MINIMUM HEIGHT OF FILTER SHOULD BE 18 INCHES AND A MAXIMUM OF 36 INCHES ABOVE NATURAL GROUND.
5. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED 8 INCHES AT THE POSTS, AND FOLDED.
6. SEE COH STANDARD SPECIFICATION FOR FILTER FABRIC BARRIER.

FF
SYMBOL

REINFORCED FILTER FABRIC BARRIER



CONSTRUCTION NOTES:

1. LENGTH SHALL BE AS SHOWN ON THE CONSTRUCTION DRAWINGS, BUT NOT LESS THAN 50 FEET.
2. THICKNESS SHALL BE NOT LESS THAN 8 INCHES.
3. WIDTH SHALL BE NOT LESS THAN FULL WIDTH OF ALL POINTS OF INGRESS OR EGRESS.
4. STABILIZATION FOR OTHER AREAS SHALL HAVE THE SAME AGGREGATE THICKNESS AND WIDTH REQUIREMENTS AS THE STABILIZED CONSTRUCTION ACCESS, UNLESS OTHERWISE SHOWN ON THE CONSTRUCTION DRAWINGS.
5. STABILIZED AREA MAY BE WIDENED OR LENGTHENED TO ACCOMMODATE A WASHING AREA. AN OUTLET TRAP MUST BE PROVIDED FOR THE WASHING AREA.
6. COH STANDARD SPECIFICATION FOR STABILIZED CONSTRUCTION ACCESS.
7. STABILIZED CONSTRUCTION ACCESS SHALL BE MAINTAINED FREE OF SEDIMENT FOR THE DURATION OF THE PROJECT.

SC
SYMBOL

STABILIZED CONSTRUCTION ACCESS

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

STORM WATER POLLUTION PREVENTION PLAN DETAILS
(NOT TO SCALE)

APPROVED
CITY ENGINEER

APPROVED
DIRECTOR OF PUBLIC WORKS AND ENGINEERING

EFF DATE: JULY-01-2010 DWG NO: **01571-01**

SDPS
Houston Storm Drainage Program Support

PGAL
3507 9505
NO. 7-2752
3131 SHIRAZPOUR, SUITE 200
HOUSTON, TEXAS 77042
PHONE (713) 822-1444
FAX (713) 868-9333

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

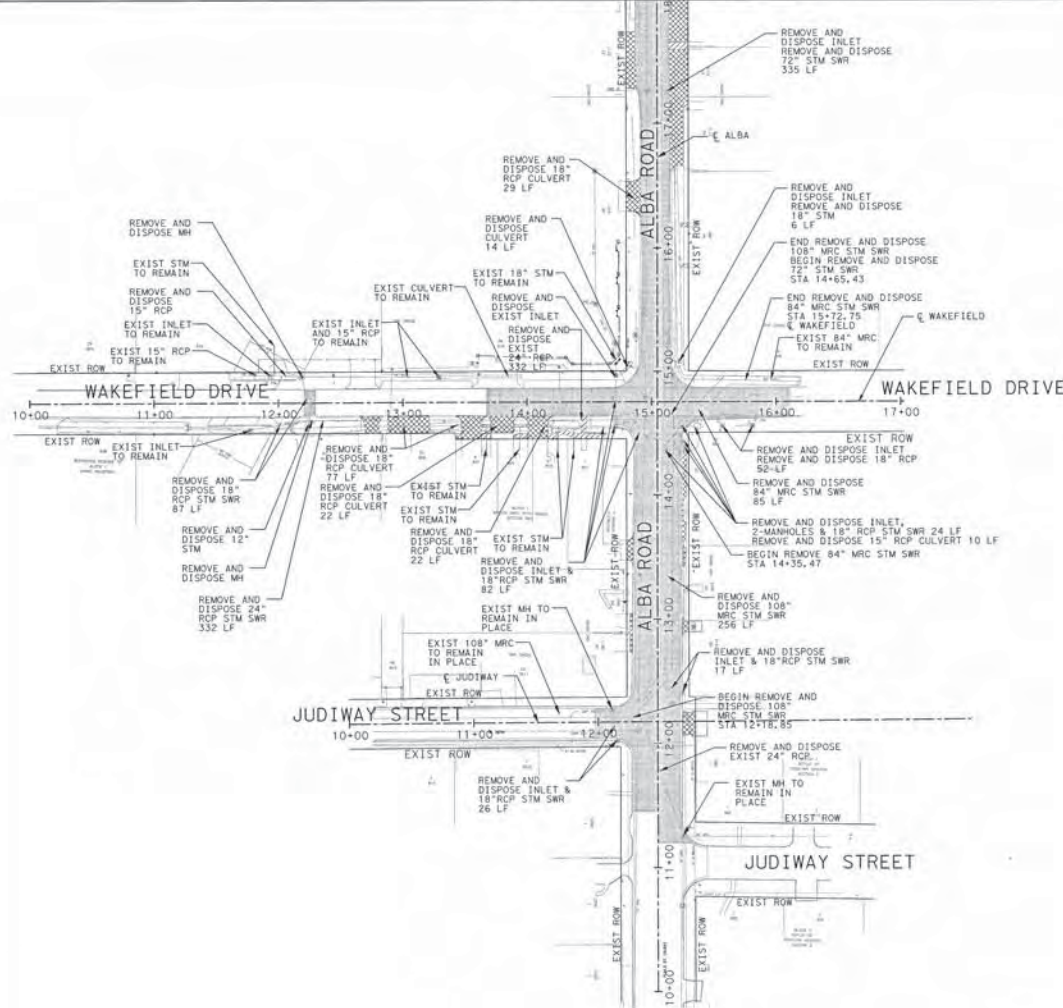
STORM WATER POLLUTION PREVENTION PLAN DETAILS SHEET 1 OF 1

WBS NUMBER
M-000285-0001-4
DRAWING SCALE
NTS
CITY OF HOUSTON PW
JEFFREY T. HALL, P.E.
SHEET NO. 172 OF 385







55630

DATE: 04/20/2015 7:40:09 AM
DRAWING: C:\WORK\000000\000000\000000\000000\000000.dwg

MATCH LINE STA 18+00.00



DEMOLITION LEGEND

-  REMOVE AND DISPOSE EXISTING CONCRETE PAVEMENT
-  REMOVE AND DISPOSE EXISTING ASPHALT PAVEMENT
-  REMOVE AND DISPOSE EXISTING CONCRETE PAVEMENT W/ ASPHALTIC LAYER
-  REMOVE AND DISPOSE EXISTING DRIVEWAY
-  REMOVE AND DISPOSE EXISTING SIDEWALK/WHEELCHAIR RAMP
-  REMOVE AND DISPOSE EXISTING CURB

NOTES:

1. REFER TO PLAN & PROFILE SHEETS FOR PROPOSED STORM SEWER SYSTEM AND PAVEMENT LIMITS. (SHEET NO. 74 TO 124)
2. ALL STATION ARE BASE OFF THE ALBA ROAD CENTERLINE ALIGNMENT UNLESS OTHERWISE NOTED.



PGAL
 3121 BRANNPARK, SUITE 200
 HOUSTON, TEXAS 77042
 PHONE (713) 822-1444
 FAX (713) 988-9333

SURVEYED BY: LANDTECH
 FB NO. P-0516

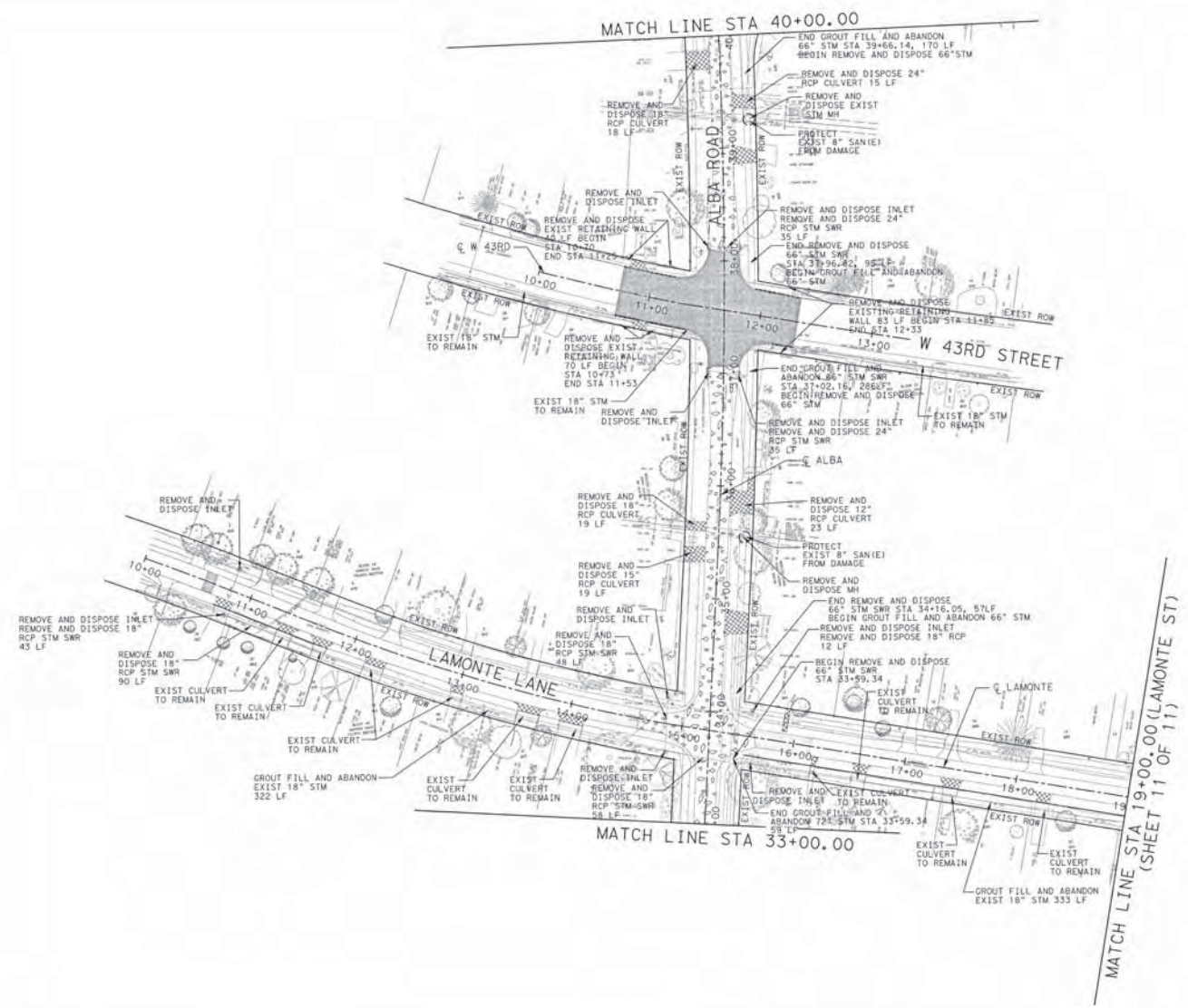
CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

PAVEMENT/STORM DEMOLITION PLAN
 SHEET 1 OF 11

WBS NUMBER	M-000285-0001-4
DRAWING SCALE	1"=50'
CITY OF HOUSTON PM	JEFFREY T. HALL, P.E.
SHEET NO.	173 OF 385





DEMOLITION LEGEND

	REMOVE AND DISPOSE EXISTING CONCRETE PAVEMENT
	REMOVE AND DISPOSE EXISTING ASPHALT PAVEMENT
	REMOVE AND DISPOSE EXISTING CONCRETE PAVEMENT W/ ASPHALTIC LAYER
	REMOVE AND DISPOSE EXISTING DRIVEWAY
	REMOVE AND DISPOSE EXISTING SIDEWALK/WHEELCHAIR RAMP
	REMOVE AND DISPOSE EXISTING CURB

- NOTES:**
- REFER TO PLAN & PROFILE SHEETS FOR PROPOSED STORM SEWER SYSTEM AND PAVEMENT LIMITS. (SHEET NO. 74 TO 124)
 - ALL STATION ARE BASE OFF THE ALBA ROAD CENTERLINE ALIGNMENT UNLESS OTHERWISE NOTED.



PGAL
INC. REG. NO. F-2762
 3131 BRANFAR, SUITE 200
 HOUSTON, TEXAS 77042
 PHONE (713) 622-1444
 FAX (713) 688-9333

SURVEYED BY: LINGTECH
 F/B NO. P-5576

CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

PAVEMENT/STORM DEMOLITION PLAN
 SHEET 4 OF 11

WDS NUMBER	M-000285-0001-4
DRAWING SCALE	1"=50'
CITY OF HOUSTON PM	JEFFREY T. HALL, P.E.
SHEET NO.	176 OF 385

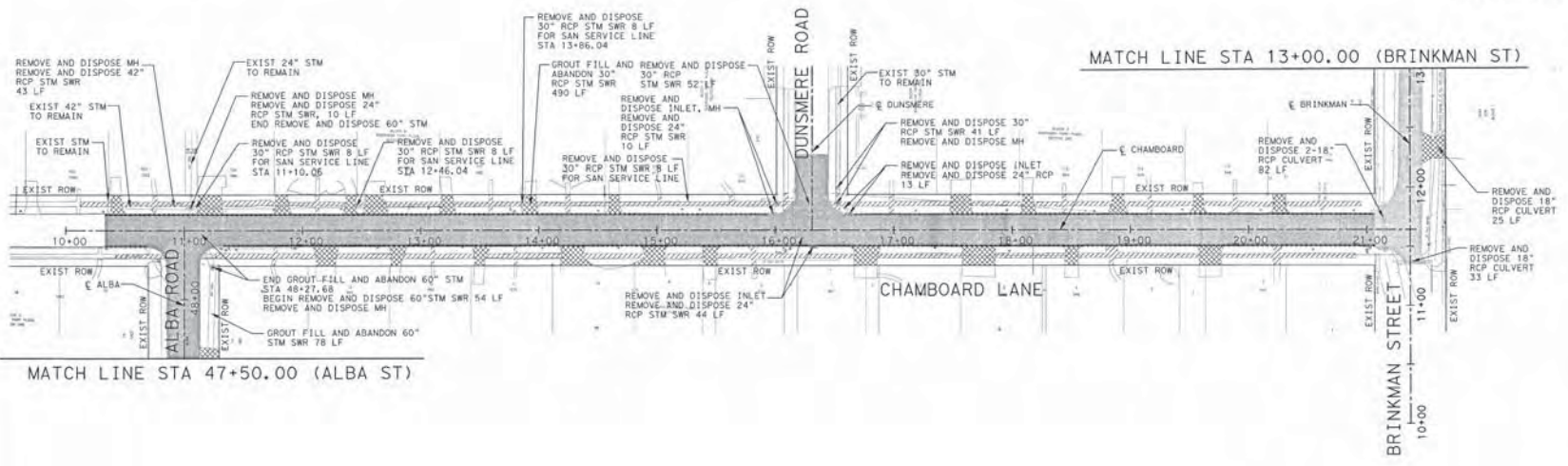


DATE: 04/26/2015 3:56:34 PM
PROJECT: PGAL/SDPS/2015002 - DRAINAGE/STORM/PLAN/178.DWG

- NOTES:**
1. REFER TO PLAN & PROFILE SHEETS FOR PROPOSED STORM SEWER SYSTEM AND PAVEMENT LIMITS. (SHEET NO. 74 TO 124)
 2. ALL STATION ARE BASE OFF THE ALBA ROAD CENTERLINE ALIGNMENT UNLESS OTHERWISE NOTED.

DEMOLITION LEGEND

	REMOVE AND DISPOSE EXISTING CONCRETE PAVEMENT
	REMOVE AND DISPOSE EXISTING ASPHALT PAVEMENT
	REMOVE AND DISPOSE EXISTING CONCRETE PAVEMENT W/ ASPHALTIC LAYER
	REMOVE AND DISPOSE EXISTING DRIVEWAY
	REMOVE AND DISPOSE EXISTING SIDEWALK/WHEELCHAIR RAMPS
	REMOVE AND DISPOSE EXISTING CURB



PGAL
 2015 REG. NO. 1-2742
 3151 BRIMMING, SUITE 200
 HOUSTON, TEXAS 77042
 PHONE (713) 622-1444
 FAX (713) 968-9333



SURVEYED BY: LANDTECH
 18 NO. P-15076

CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

PAVEMENT/STORM DEMOLITION PLAN
 SHEET 6 OF 11

WBS NUMBER
 M-000285-0001-4

DRAWING SCALE
 1"=50'

CITY OF HOUSTON PW

JEFFREY T. HALL, P.E.
 SHEET NO. 178 OF 385



DATE: 02/21/05
 DRAWN BY: JIMMY J. JONES, JEP
 44338.PW

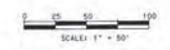
MATCH LINE STA 26+00.00



DEMOLITION LEGEND

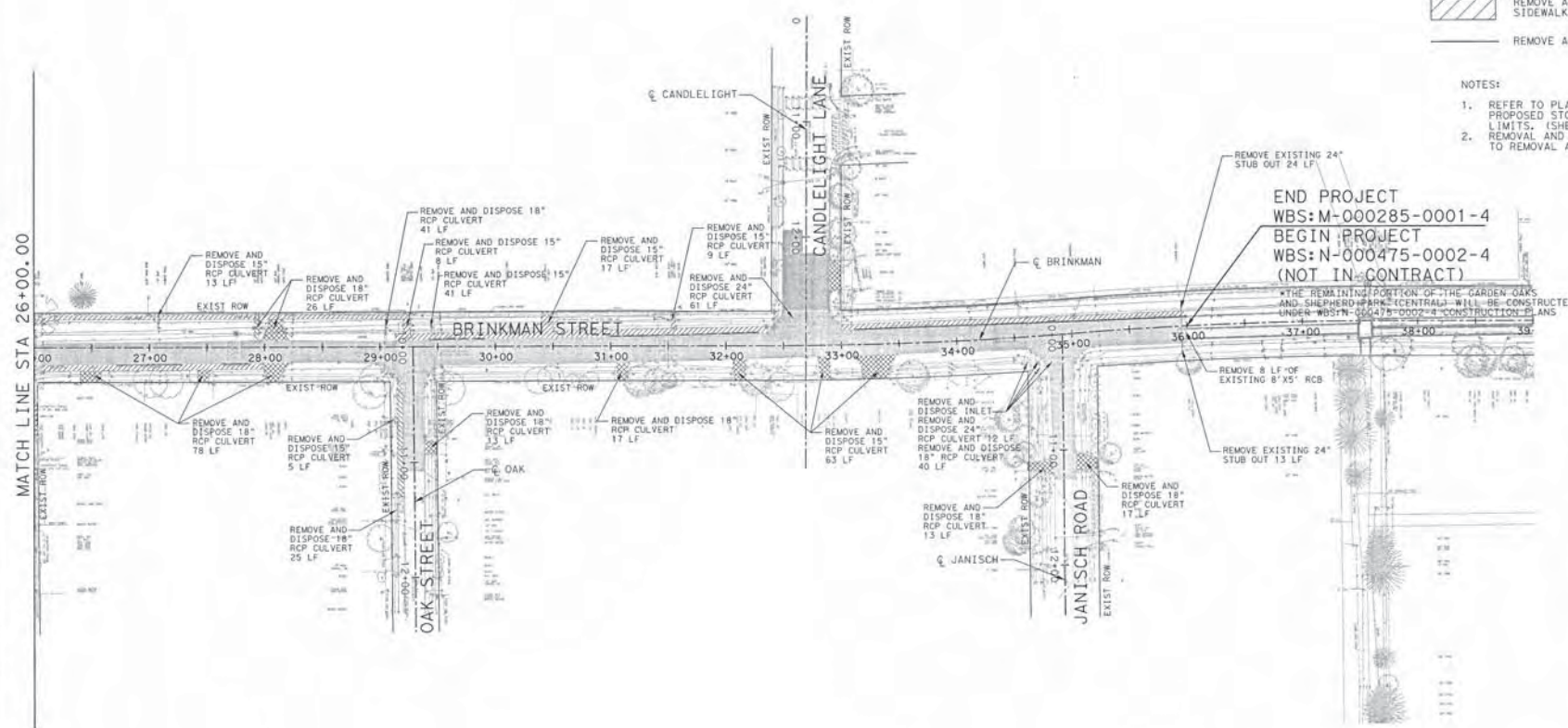
	REMOVE AND DISPOSE EXISTING CONCRETE PAVEMENT
	REMOVE AND DISPOSE EXISTING ASPHALT PAVEMENT
	REMOVE AND DISPOSE EXISTING CONCRETE PAVEMENT W/ ASPHALTIC LAYER
	REMOVE AND DISPOSE EXISTING DRIVEWAY
	REMOVE AND DISPOSE EXISTING SIDEWALK/WHEELCHAIR RAMPS
	REMOVE AND DISPOSE EXISTING CURB

- NOTES:**
- REFER TO PLAN & PROFILE SHEETS FOR PROPOSED STORM SEWER SYSTEM AND PAVEMENT LIMITS. (SHEET NO. 74 TO 124)
 - REMOVAL AND DISPOSE OF CURB IS INCIDENTAL TO REMOVAL AND DISPOSE OF EXIST PAVEMENT.



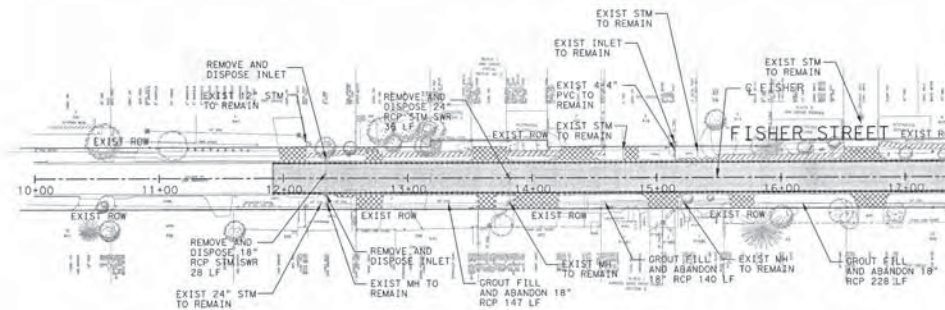
END PROJECT
 WBS: M-000285-0001-4
BEGIN PROJECT
 WBS: N-000475-0002-4
 (NOT IN CONTRACT)

*THE REMAINING PORTION OF THE GARDEN OAKS AND SHEPHERD PARK (CENTRAL) WILL BE CONSTRUCTED UNDER WBS: N-000475-0002-4 CONSTRUCTION PLANS



<p>3131 BRINDGARD, SUITE 200 Houston, Texas 77042 Phone: (713) 822-1444 Fax: (713) 968-9333</p>	
<p>SURVEYED BY: LANDTECH File No. 04-9316</p>	
<p>CITY OF HOUSTON DEPARTMENT OF PUBLIC WORKS AND ENGINEERING</p>	
<p>GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING</p>	
<p>PAVEMENT/STORM DEMOLITION PLAN SHEET 8 OF 11</p>	
<p>WBS NUMBER M-000285-0001-4</p>	
<p>DRAWING SCALE 1"=50'</p>	
<p>CITY OF HOUSTON PM JEFFREY T. HALL, P. E.</p>	
<p>SHEET NO. 180 OF 395</p>	

DATE: 08/20/2005 7:06:03 AM
 PROJECT: C:\WORK\2005\20050820\DWG\DWG\10941\10941_RWD.dwg



MATCH LINE STA 17+50.00 (FISHER ST)
 (SEE SHEET 2)



DEMOLITION LEGEND

	REMOVE AND DISPOSE EXISTING CONCRETE PAVEMENT
	REMOVE AND DISPOSE EXISTING ASPHALT PAVEMENT
	REMOVE AND DISPOSE EXISTING CONCRETE PAVEMENT W/ ASPHALTIC LAYER
	REMOVE AND DISPOSE EXISTING DRIVEWAY
	REMOVE AND DISPOSE EXISTING SIDEWALK/WHEELCHAIR RAMPS
	REMOVE AND DISPOSE EXISTING CURB

- NOTES:**
- REFER TO PLAN & PROFILE SHEETS FOR PROPOSED STORM SEWER SYSTEM AND PAVEMENT LIMITS. (SHEET NO. 74 TO 124)



SDPS
Houston Storm Drainage
Program Support

PGAL
INCORPORATED
 3131 BRIMMYPARK, SUITE 200
 HOUSTON, TEXAS 77042
 PHONE (713) 822-1444
 FAX (713) 988-9333

SURVEYED BY: LANDTECH P-0516

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

PAVEMENT/STORM DEMOLITION PLAN
SHEET 9 OF 11

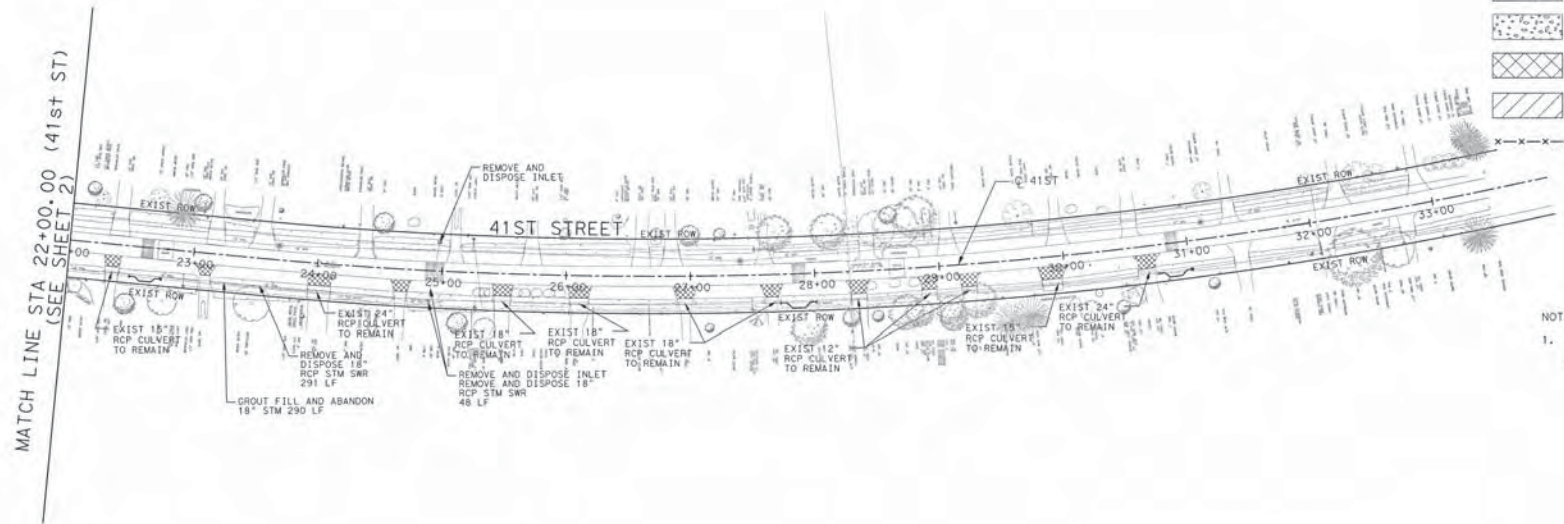
WDS NUMBER	
M-000285-0001-4	55630
DRAWING SCALE	1"=50'
CITY OF HOUSTON PW	JEFFREY T. HALL, P.E.
SHEET NO. 181 OF 385	

DATE	12/12/2014
TIME	10:00 AM
PROJECT	55630
SHEET	112



DEMOLITION LEGEND

	REMOVE AND DISPOSE EXISTING CONCRETE PAVEMENT
	REMOVE AND DISPOSE EXISTING ASPHALT PAVEMENT
	REMOVE AND DISPOSE EXISTING CONCRETE PAVEMENT W/ ASPHALTIC LAYER
	REMOVE AND DISPOSE EXISTING DRIVEWAY
	REMOVE AND DISPOSE EXISTING SIDEWALK/WHEELCHAIR RAMPS
	REMOVE AND DISPOSE EXISTING CURB



- NOTES:
- REFER TO PLAN & PROFILE SHEETS FOR PROPOSED STORM SEWER SYSTEM AND PAVEMENT LIMITS. (SHEET NO. 74 TO 124)



PGAL
 2PM 855
 No. P-2962
 3131 BRIMMINGHAM, SUITE 200
 HOUSTON, TEXAS 77042
 PHONE (713) 652-1444
 FAX (713) 968-9333



SURVEYED BY: LANDTECH P-55176
 FB NO.:

CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
 GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING
 PAVEMENT/STORM DEMOLITION PLAN
 SHEET 10 OF 11

WBS NUMBER
 M-000285-0001-4
 DRAWING SCALE
 1"=50'
 CITY OF HOUSTON PM
 JEFFREY T. HALL, P.E.
 SHEET NO. 182 OF 385



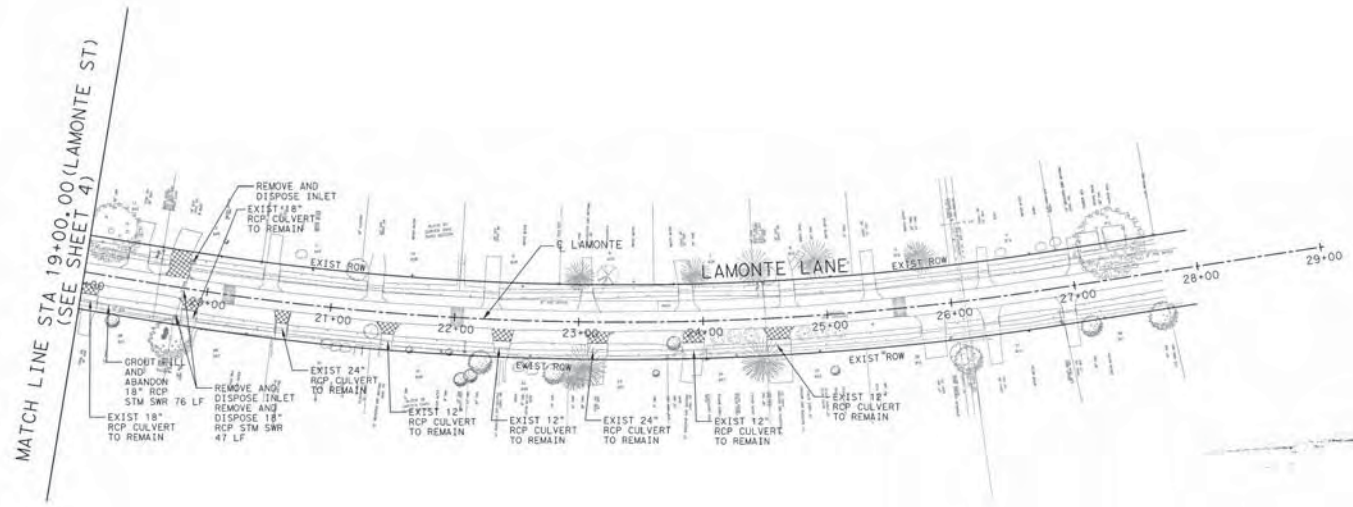
DATE: 9/30/2014 TIME: 7:06:27 AM
 I:\A\000285\CAD\DWG\DWG\0001\0001.dwg USER: JMKZ GDT



DEMOLITION LEGEND

	REMOVE AND DISPOSE EXISTING CONCRETE PAVEMENT
	REMOVE AND DISPOSE EXISTING ASPHALT PAVEMENT
	REMOVE AND DISPOSE EXISTING CONCRETE PAVEMENT W/ ASPHALTIC LAYER
	REMOVE AND DISPOSE EXISTING DRIVEWAY
	REMOVE AND DISPOSE EXISTING SIDEWALK/WHEELCHAIR RAMPS
	REMOVE AND DISPOSE EXISTING CURB

NOTES:
 1. REFER TO PLAN & PROFILE SHEETS FOR PROPOSED STORM SEWER SYSTEM AND PAVEMENT LIMITS. (SHEET NO. 74 TO 124)



<p>SDPS Houston Storm Drainage Program Support</p>	
<p>PGAL TYPE REG. NO. F-2742 3131 BIRDAWAY, SUITE 200 Houston, Texas 77042 Phone (713) 822-1444 Fax (713) 968-9333</p>	
<p>SURVEYED BY: LANDTECH F&M NO. PL-55716</p>	
<p>CITY OF HOUSTON DEPARTMENT OF PUBLIC WORKS AND ENGINEERING</p>	
<p>GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING</p>	
<p>PAVEMENT/STORM DEMOLITION LAYOUT SHEET 11 OF 11</p>	
<p>WBS NUMBER M-000285-0001-4</p>	
<p>DRAWING SCALE 1"=50'</p>	
<p>CITY OF HOUSTON PM JEFFREY T. HALL, P. E. SHEET NO. 163 OF 385</p>	

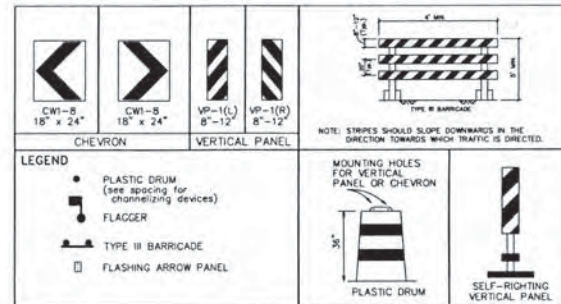
GENERAL NOTES

- The Contractor shall provide and install traffic control devices in conformance with Part VI of Texas Manual on Uniform Traffic Control Devices (TMUTCD) latest edition with revisions during the entire construction period.
- All signs and traffic control devices shall conform to the latest version of the TMUTCD.
- No lanes shall be closed during the hours of 7:00 AM to 9:00 AM and 4:00 PM to 6:00 PM Monday thru Friday without approval of the City Traffic Engineer.
- No work shall be performed in residential areas from 7:00 PM to 7:00 AM.
- Contractor shall maintain approved number of thru lanes of traffic in each direction during construction working hours. Traffic control plans shall include one-way and/or detour plans.
- Contractor shall maintain traffic lanes and detours according to traffic control plans during working hours.
- Contractor shall cover open pavement excavations for minor utility work with anchored steel plates during non-working hours, and open lanes for normal traffic flow when feasible.
- If the Contractor chooses to use a different method of "Traffic Control Plans" during the construction than what is outlined in the contract drawings, the Contractor shall be responsible to prepare and submit an alternate set of traffic control plans to the City of Houston Project Manager for approval ten working days prior to implementation. These plans shall be drawn to scale on reproducible mylars and shall be sealed by a Licensed Engineer in the State of Texas. Traffic Operations Division representative approval is required to accept the proposed changes.
- Contractor shall secure lane/sidewalk closure permits from Traffic Operations Division (Mobility Permit Section at <http://www.gims.houstontx.gov/portals/WS/MainPortal.aspx>) before implementing the traffic control plan. The application must be submitted at least ten business days prior to the implementation of the traffic control plan and/or beginning construction work. The contractor shall provide traffic control plans, construction sequencing, and schedule with the application.
- Contractor shall have approved traffic control plan and permit at the job site for inspection at all times.
- During pavement surface restoration projects; the Contractor shall not open closed lanes until the pavement surface has cured enough to allow vehicular traffic according to City of Houston Standard Specifications.
- The Contractor is responsible for scheduling and coordinating all construction activities with stake holders in the vicinity including emergency response agencies such as Houston Police Department, Houston Fire Department, and Metropolitan Transit Authority.
- Contractor shall be responsible for issuing all work directives to all sub-contractors, utility companies, and all other entities performing construction work associated with the project.
- Nothing in these notes or plans shall relieve the Contractor of the responsibility for job site conditions during the course of construction of the project; including safety of all modes of transportation, persons, and property, and that this requirement shall apply continuously and not be limited to working hours.
- The Traffic Operation Division (Mobility Permits Group) per the direction of the City Traffic Engineer have the right to demand the installation of additional traffic control devices or modifications to these plans and notes, as deemed necessary to promote the safe and orderly flow of traffic and pedestrians through the construction work zone. The Contractor shall comply with these additional requests or modifications with due diligence.
- All existing traffic control signs and pavement markings shall be maintained in visible locations during construction unless prior written approval is obtained from City of Houston Project Manager. The Contractor shall restore or replace (at the discretion of the City Traffic Engineer) any pavement marking or signing damaged during construction operations, including Raised Pavement Markers (RPMs) and chip seal markers.
- When entering or leaving roadways carrying public traffic, the Contractor's equipment, whether empty or loaded shall in all cases yield to public traffic with assistance by Contractor provided certified flagger/peace officer.
- Access to driveways adjacent to the construction work zone shall be maintained at all times as much as possible. Additional cones/delineators may be required to delineate the driveway access route through the construction work zone. A minimum of one travel lane shall be maintained across the driveways, unless prior written approval is obtained from City of Houston Project Manager.
- Spillage resulting from hauling operations along or across any public traveled way shall be removed immediately by the Contractor.
- The Contractor shall submit an application for temporary parking restrictions if there are parking meters located at the proposed lane closures from Parking Management Division (832-393-8690) at least ten business days before implementation of lane closures. In addition, temporary no parking signs shall be posted 24 hours prior to commencement of work.
- Additional off duty police officers/flaggers may be requested to direct traffic when lanes are blocked at the discretion of the City Project Manager even if they are not specifically identified on the project plans.
- The Contractor shall replace within 72 hours, all traffic signal loop detectors damaged during construction.
- In general, a solar powered flashing arrow board shall be required on all major thoroughfare lane closures. Exceptions to flashing arrow boards and/or implementation on residential lane closures shall be approved by the City Traffic Engineer.
- Approved traffic control plan shall be in place before starting any excavation.

SPACING FOR CHANNELIZING DEVICES

- Plastic drums on merging taper @ 30' c - c with chevron sign @ 60' c - c and warning lights for overnight closure.
- Plastic drums on downstream taper @ 30' c - c (return taper and barricade are optional and divided roadway section)
- Plastic drums on radii @ 35' c - c.
- Plastic drums on tangent @ 35' c - c with vertical panel at 70' c - c and approved warning light @ 70' c - c (for overnight closure).
- Plastic drums in front of construction zone @ 20' c - c with vertical panel at 40' c - c and approved warning light @ 40' c - c (for overnight closure).
- Concrete Traffic Barrier (CTB) or Low Profile Concrete Traffic Barrier (LPCTB) with approved reflectors @ 10' c - c if pavement drop is greater than 1 foot.
- Plastic drums w/Guard rail mounted.
- Self-Righting vertical panel spacing.
 - 4 lanes to 2 lanes undivided roadway section @ 20' c - c.
 - 4 lanes divided roadway to one side two way roadway @ 20' c - c.
 - Left lane and right lane storage bays @ 15' c - c.
- Spacing shown on traffic control shall supersede the above spacing.
- Spacing may be adjusted to provide driveways, intersections and/or median openings.

CHANNELIZATION AND BARRICADES



Posted Speed (mph)	Sign Spacing "x"	Min. Desirable Taper Length "x"			Suggested Maximum Spacing Of Device	
		10' Offset	11' Offset	12' Offset	On a Taper	On a Tangent
30	120'	150'	165'	180'	30'	60' - 75'
35	160'	205'	225'	245'	35'	70' - 90'
40	240'	265'	295'	320'	40'	80' - 100'
45	320'	490'	495'	540'	45'	90' - 110'
50	400'	500'	550'	600'	50'	100' - 125'
55	500'	550'	605'	660'	55'	110' - 140'

Posted Speed (mph)	Length in Feet (B)
20	40
25	60
30	90
35	120
40	155
45	195
50	240
55	295
60	350
65	410
70	475

DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

TCP NOTES
CHANNELIZING DEVICES
AND BARRICADES

(NOT TO SCALE)

APPROVED BY: *[Signature]*
CITY ENGINEER

DIRECTOR OF PUBLIC WORKS AND ENGINEERING

EFF DATE: JUL-01-2012 DWG NO: 01512-01

EXISTING POSTED SPEED LIMITS:
ALBA RD./CHAMBOARD LN./BRINKMAN LN.: 30 MPH
W. 43RD ST.: 30 MPH
PINEMONT DR.: 35 MPH
ALL OTHER CROSS STREETS: 30 MPH

CONSTRUCTION ZONE DESIGN SPEED LIMIT: 30 MPH

ADDITIONAL NOTE:
CONTRACTOR TO NOTIFY POLICE DEPARTMENT, FIRE DEPARTMENT, SCHOOL, SCHOOL DISTRICT, METRO, AND UNITED STATES POSTAL SERVICES OF ONE WAY OPERATION A MINIMUM OF FIVE (5) WORKING DAYS BEFORE IMPLEMENTATION.

SDPS
Houston Storm Drainage Program Support

PGAL
3131 BIRNBAUM, SUITE 200
Houston, Texas 77042
Phone: (713) 622-1614
Fax: (713) 668-6333

iSani CONSULTANTS
3143 YELLOWSTONE BLVD.
HOUSTON, TX 77054
TEL: (713) 747-2393
FAX: (713) 748-3748

DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

TCP-1 OF 70 SHEET 1 OF 1

WBS NUMBER: M-000285-0001-4
DRAWING SCALE: NTS
CITY OF HOUSTON PM: JEFFREY T. HALL, P.E.
SHEET NO. 184 OF 385

DATE: 6/14/2016 9:30:00 AM
PATH: \\P:\Projects\2016\16050\Drawings\Traffic\Control Plans\TCP-Notes.dwg

CONSTRUCTION NARRATIVE

GENERAL NOTES FOR ALL PHASES/STEPS:

1. PLACE ADVANCE WARNING SIGNS ALONG THE PROJECT AREA.
2. PLACE DETOUR SIGNS ALONG THE PROJECT AREA WHERE APPLICABLE.
3. CLOSE THE STREETS AS PER THE STEPS SHOWN FOR PHASES .
4. RESTORE TRAFFIC TO NEW CONSTRUCTED PAVEMENT BY PROCEEDING CONSTRUCTION WITH BLOCKS AT A TIME.
5. MAINTAIN THE CONSTRUCTION ZONE SPEED LIMIT OF 30 MPH.
6. NO TWO CONSECUTIVE SIDE STREETS ARE TO BE CLOSED AT THE SAME TIME.
7. MAINTAIN ACCESS TO ALL DRIVEWAYS AT ALL TIMES DURING CONSTRUCTION. PROVIDE LOW PROFILE CONCRETE BARRIERS (LPCB) AS SHOWN ON THE TYPICAL SHEET (TYP-7) TCP-59A OF 70 FOR PROVIDING ACCESS TO DRIVEWAYS DURING CONSTRUCTION. LPCB'S SHOULD NOT BLOCK THE DRIVEWAY ACCESS DURING CONSTRUCTION.
8. AVOID EXISTING DRIVEWAYS FOR PLACING THE TRAFFIC CONTROL SIGNS.
9. USE FAST TRACK CONCRETE AT ALBA RD./43RD ST. INTERSECTION.
10. 800 FEET ROLLING CLOSURES. CONTRACTOR SHOULD CONSTRUCT THE UNDERGROUND UTILITIES AND PROPOSED PAVEMENT ON ONE SIDE OF THE STREET PER THE TRAFFIC CONTROL PLAN IN BLOCKS AND MOVE TO NEXT BLOCK BY OPENING TWO-WAY TRAFFIC, ONE DIRECTION ON THE EXISTING PAVEMENT AND OTHER ON THE PROPOSED PAVEMENT. THE TRAFFIC WILL BE SEPARATED BY LPCB WHERE THE ELEVATION DIFFERENCE IN THE EXISTING AND PROPOSED PAVEMENTS EXISTS. SEE TYPICAL SHEET (TYP-7) TCP-59A OF 70 FOR DETAILS.
11. PROPOSED STORM SEWER INCLUDES THE TRUNK LINE, LATERALS, INLETS, WATER LINES, SANITARY SEWER AND ANY OTHER ASSOCIATED UTILITIES.
12. PROPOSED CONCRETE PAVEMENT INCLUDES THE CURBS, PAVEMENT, SIDEWALK AND THE DRIVEWAYS.
13. SEE ROADWAY PLAN AND PROFILE DRAWINGS FOR EXACT WIDTH OF THE PAVEMENTS.
14. SEE ROADWAY PLAN AND PROFILE DRAWINGS FOR LIMITS OF PROPOSED ASPHALT TRANSITION, ASPHALT PAVEMENT AND CONCRETE PAVEMENT.
15. RESTORE THE PAVEMENT WITH ASPHALT FOR THE STORM SEWER LATERALS CONSTRUCTION.

NOTES :

1. CONSTRUCT THE WORK IN PHASES DURING THE CONSTRUCTION PERIOD; COORDINATE CONSTRUCTION SCHEDULE AND OPERATIONS WITH THE CITY OF HOUSTON.
2. THE FOLLOWING PHASES ARE RECOMMENDED FOR THE PROJECT:

PHASE 1: THIS PHASE INCLUDES THE DEMOLITION, CONSTRUCTION OF TEMPORARY ASPHALT, PROPOSED STORM SEWER, UTILITIES, AND PROPOSED PAVEMENT BASE FOR ALBA ROAD. THE LIMITS OF CONSTRUCTION IN THIS PHASE ARE:

ALBA (EAST SIDE) - JUDIWAY TO ALTHEA
 ALBA (WEST SIDE) - ALTHEA TO CHAMBOARD
 CONSTRUCTION WILL ALSO TAKE PLACE ON WAKEFIELD DRIVE, 41ST STREET, SUE BARNETT DRIVE (WEST OF ALBA), AND 43RD STREET. THE MAXIMUM ROLLING LENGTH OF EACH CONSTRUCTION SEGMENT SHALL NOT EXCEED 1,500 FEET.

PHASE 2: THIS PHASE INCLUDES THE DEMOLITION, CONSTRUCTION OF TEMPORARY ASPHALT, PROPOSED STORM SEWER, UTILITIES, AND PROPOSED PAVEMENT ON THE NORTH SIDE OF CHAMBOARD AND WEST SIDE OF BRINKMAN.

THE LIMITS OF CONSTRUCTION IN THIS PHASE ARE:
 CHAMBOARD (NORTH SIDE) -ALBA TO BRINKMAN
 BRINKMAN (WEST SIDE) - CHAMBOARD TO THE NORTH PROJECT LIMITS

CONSTRUCTION WILL ALSO TAKE PLACE ALONG THORNTON ROAD, CANDLELIGHT LANE, AND LEHMAN STREET (WEST OF BRINKMAN). THE ROLLING LENGTH OF EACH CONSTRUCTION SEGMENT SHALL NOT EXCEED 1,500 FEET.

3. PHASE 3: THIS PHASE INCLUDES THE DEMOLITION, CONSTRUCTION OF PROPOSED STORM SEWER, UTILITIES, AND PROPOSED PAVEMENT BASE AND COMPLETE PAVEMENT CONSTRUCTION FOR THE EAST AND WEST SIDES OF ALBA ROAD. THE LIMITS OF CONSTRUCTION IN THIS PHASE ARE:

ALBA (WEST SIDE) - JUDIWAY TO ALTHEA
 ALBA (EAST SIDE) - ALTHEA TO CHAMBOARD

CONSTRUCTION WILL ALSO TAKE PLACE ON WAKEFIELD DRIVE, 41ST STREET, SUE BARNETT DRIVE (WEST OF ALBA), AND 43RD STREET. THE MAXIMUM ROLLING LENGTH OF EACH CONSTRUCTION SEGMENT SHALL NOT EXCEED 1,500 FEET.

THE PAVEMENT FINISHED GRADE FOR THE ENTIRE WIDTH OF ALBA WILL BE CONSTRUCTED IN PHASE 3.

CONSTRUCTION WILL PROGRESS FROM SOUTH TO NORTH AND WILL ALSO INCLUDE THE REMAINING PROPOSED WORK ON ALBA ROAD S SIDE STREETS. THE ROLLING LENGTH OF EACH CONSTRUCTION SEGMENT SHALL NOT EXCEED 1,500 FEET.

4. PHASE 4: THIS PHASE INCLUDES THE DEMOLITION, PROPOSED STORM SEWER, UTILITIES, AND PROPOSED PAVEMENT BASE ON THE NORTH SIDE OF CHAMBOARD AND WEST SIDE OF BRINKMAN. THE LIMITS OF CONSTRUCTION IN THIS PHASE ARE:
 CHAMBOARD (SOUTH SIDE) - ALBA TO BRINKMAN
 BRINKMAN (EAST SIDE) - CHAMBOARD TO THE NORTH PROJECT LIMITS

CONSTRUCTION WILL ALSO TAKE PLACE ALONG THORNTON ROAD, CANDLELIGHT LANE, AND LEHMAN STREET (WEST OF BRINKMAN) AND OTHER SIDE STREETS AS PART OF THIS PHASE. THE ROLLING LENGTH OF EACH CONSTRUCTION SEGMENT SHALL NOT EXCEED 1,500 FEET.

ADDITIONAL NOTES FOR CONSTRUCTION PHASING:

1. THE CONSTRUCTION PHASE OF THE PROJECT NEEDS TO GO FROM SOUTH TO NORTH AS THE FOLLOWING SEGMENTS.
2. THESE SEGMENTS ARE ALLOWED TO BE CLOSED A MAXIMUM OF 1500 FEET AT ANY GIVEN TIME
3. ALL STATIONS ARE BASED OFF THE ALBA ROAD CENTERLINE

ALBA ROAD - BEGINNING OF PROJECT JUDIWAY), TO NORTH OF FISHER STA 22+15 - CONCRETE PAVEMENT SECTION
 ALBA ROAD - NORTH OF FISHER STA 22+15 TO 43RD STREET INTERSECTION STA 37+02.16 - ASPHALTIC PAVEMENT SECTION
 ALBA ROAD - 43RD STREET STA 38+10.00 TO CHAMBOARD STA 46+78.04 - ASPHALTIC PAVEMENT SECTION
 CHAMBOARD - CONCRETE PAVEMENT SECTION
 BRINKMAN FROM CHAMBOARD TO MARTIN INTERSECTION - CONCRETE PAVEMENT SECTION
 MARTIN INTERSECTION TO END OF PROJECT (DITCH E101-15-01) - CONCRETE PAVEMENT SECTION

4. REFER TO CONSTRUCTION PLANS FOR EXACT LIMITS OF CONCRETE PAVEMENT SECTION AND ASPHALTIC PAVEMENT SECTION. 43RD STREET INTERSECTION WILL BE CONSTRUCTED AS CONCRETE PAVEMENT SECTION.
5. STORM SEWER ALONG BRINKMAN FROM CHAMBOARD TO CURTIN TO BE DONE IN AN EXPEDITED FASHION AND ACCESS TO BIBLE WAY BAPTIST CHURCH TO BE RESTORED ALONG BRINKMAN, UNTIL SUCH TIME AS ACCESS ALONG CHAMBOARD IS AVAILABLE.
6. IN EACH SEGMENT CONTRACTOR HAS THE OPTION OF BUILDING THE COMPLETE PAVEMENT CROSS SECTION IN ONE PHASE.

	
	
3131 BRIMFARM, SUITE 200 HOUSTON, TEXAS 77042 Phone: (713) 625-1444 Fax: (713) 986-6333	
 3143 YELLOWSTONE BLVD. HOUSTON, TX 77054 TEL: (713) 747-2399 FAX: (713) 749-3748	 2/24/2016
SURVEYED BY: LANDTECH P.E. NO. 14-0576	
CITY OF HOUSTON DEPARTMENT OF PUBLIC WORKS AND ENGINEERING	
GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING CONSTRUCTION NARRATIVE NOTES	
TCP-2 OF 70	SHEET 1 OF 3
WBS NUMBER M-000285-0001-4	FOR CITY OF HOUSTON USE ONLY
DRAWING SCALE NTS	 5563U
CITY OF HOUSTON PM JEFFREY T. HALL, P.E.	SHEET NO. 185 OF 385

CONSTRUCTION NARRATIVE

PHASE 2 STEP 6:

1. CONSTRUCT THE PROPOSED STORM SEWER (8'X5' RCB ALONG BRINKMAN (CANDLELIGHT TO STA 36+00).
2. CONSTRUCT THE PROPOSED CONCRETE PAVEMENT (14.5') ALONG BRINKMAN LANE SB FROM CANDLELIGHT LANE TO STA 36+00.

PHASE 3 STEP 1:

1. CONSTRUCT THE REMAINING PROPOSED CONCRETE PAVEMENT (WIDTH VARIES FROM 15' TO 20') ALONG ALBA ROAD SB FROM JUDIWAY STREET (EAST) TO WAKEFIELD DRIVE (INCLUDES THE INTERSECTION OF JUDIWAY (W) WITH ALBA).

PHASE 3 STEP 2:

1. CONSTRUCT THE PROPOSED STORM SEWER (30" RCP ALONG WAKEFIELD) WEST OF ALBA ROAD.
2. CONSTRUCT THE REMAINING PROPOSED CONCRETE PAVEMENT (WIDTH VARIES FROM 15' TO 20') ALONG ALBA ROAD SB FROM WAKEFIELD DRIVE TO FISHER DRIVE.
3. CONSTRUCT THE PROPOSED ASPHALT PAVEMENT TRANSITION ALONG WAKEFIELD DRIVE.

PHASE 3 STEP 3:

1. CONSTRUCT THE PROPOSED STORM SEWER (36" RCP) ALONG FISHER DRIVE EB FROM ALBA ROAD TO WEST END OF PROJECT.
2. CONSTRUCT THE PROPOSED CONCRETE PAVEMENT (13.5') ALONG FISHER DRIVE EB FROM ALBA ROAD TO WEST END OF PROJECT.

PHASE 3 STEP 4:

1. CONSTRUCT THE PROPOSED STORM SEWER AND CONCRETE PAVEMENT (REMAINING) ALONG FISHER DRIVE WB (WEST OF ALBA) FROM ALBA ROAD TO END OF PROJECT.

PHASE 3 STEP 5:

1. CONSTRUCT THE REMAINING PROPOSED CONCRETE AND ASPHALT PAVEMENT (WIDTH VARIES FROM 1' TO 11') ALONG ALBA ROAD SB FROM FISHER DRIVE TO W. 41ST. STREET.

PHASE 3 STEP 6:

1. CONSTRUCT THE PROPOSED STORM SEWER (24" AND 48" RCPS) ALONG W. 42ND EAST OF ALBA ROAD.
2. CONSTRUCT THE PROPOSED ASPHALT PAVEMENT (WIDTH VARIES FROM 7' TO 9') ALONG ALBA ROAD NB FROM W. 41ST. STREET TO LAMONTE LANE.
3. RESTORE THE PAVEMENT WITH ASPHALT ALONG W. 42ND STREET (EAST OF ALBA) AS REQUIRED (AT STORM LATERALS).

PHASE 3 STEP 7:

1. CONSTRUCT THE PROPOSED STORM SEWER (30" RCP) ALONG LAMONTE LANE EAST OF ALBA ROAD.
2. CONSTRUCT THE PROPOSED ASPHALT PAVEMENT (WIDTH VARIES FROM 9' TO 11') ALONG ALBA ROAD NB FROM LAMONTE LANE TO W. 43RD STREET.
3. RESTORE THE PAVEMENT WITH ASPHALT ALONG LAMONTE LANE (EAST OF ALBA) AS REQUIRED (AT STORM LATERALS).

PHASE 3 STEPS 8A AND 8B:

1. CONSTRUCT THE PROPOSED 22' CONCRETE PAVEMENT ON THE SOUTHEAST QUADRANT (EB LANES ALONG W. 43RD) AT ALBA AND W. 43RD STREET.
2. CONSTRUCT THE PROPOSED 22' CONCRETE PAVEMENT ON THE NORTHEAST QUADRANT (WB LANES ALONG W. 43RD) AT ALBA AND W. 43RD STREET.

PHASE 3 STEP 9:

1. CONSTRUCT THE PROPOSED STORM SEWER (24" AND 30" RCPS) ALONG AZALEA STREET EAST OF ALBA ROAD.
2. CONSTRUCT THE PROPOSED ASPHALT PAVEMENT (WIDTH VARIES FROM 9' TO 12') ALONG ALBA ROAD NB FROM W. 43RD STREET TO SUE BARNETT DRIVE.
3. RESTORE THE PAVEMENT WITH ASPHALT ALONG AZALEA STREET (EAST OF ALBA) AS REQUIRED (AT STORM LATERALS).

PHASE 3 STEP 10:

1. CONSTRUCT THE PROPOSED STORM SEWER (36" RCP) ALONG SUE BARNETT DRIVE EAST OF ALBA ROAD.
2. CONSTRUCT THE PROPOSED ASPHALT AND CONCRETE PAVEMENT (WIDTH VARIES FROM 8' TO 9.5') ALONG ALBA ROAD NB FROM SUE BARNETT DRIVE TO CHAMBOARD LANE.
3. CONSTRUCT THE PROPOSED ASPHALT PAVEMENT TRANSITION ALONG SUE BARNETT DRIVE (EAST OF ALBA) FROM ALBA ROAD TO END OF PROJECT.

PHASE 4 STEP 1:

1. CONSTRUCT THE PROPOSED CONCRETE PAVEMENT (REMAINING 13.5') ALONG CHAMBOARD LANE EB FROM ALBA ROAD TO BRINKMAN LANE.

PHASE 4 STEP 2:

1. CONSTRUCT THE PROPOSED STORM SEWER (24" RCP) ALONG CURTIN STREET.
2. CONSTRUCT THE PROPOSED CONCRETE PAVEMENT (REMAINING WIDTH) ALONG BRINKMAN LANE NB FROM CHAMBOARD LANE TO THORNTON ROAD.
3. CONSTRUCT THE PROPOSED ASPHALT TRANSITION ALONG CURTIN STREET (EAST OF BRINKMAN) FROM ALBA ROAD TO END OF PROJECT.

PHASE 4 STEP 3:

1. CONSTRUCT THE PROPOSED STORM SEWER (30" RCP) ALONG THORNTON ROAD.
2. CONSTRUCT THE PROPOSED CONCRETE PAVEMENT (REMAINING WIDTH) ALONG BRINKMAN LANE NB FROM THORNTON ROAD TO WOODCREST DRIVE.
3. CONSTRUCT THE PROPOSED ASPHALT AND CONCRETE PAVEMENT ALONG THORNTON ROAD (EAST OF BRINKMAN) FROM ALBA ROAD TO END OF PROJECT.

PHASE 4 STEP 4:

1. CONSTRUCT THE PROPOSED STORM SEWER (24" RCP) ALONG WOODCREST DRIVE.
2. CONSTRUCT THE PROPOSED CONCRETE PAVEMENT (REMAINING WIDTH) ALONG BRINKMAN LANE NB FROM WOODCREST DRIVE TO MARTIN STREET.
3. CONSTRUCT THE PROPOSED ASPHALT AND CONCRETE PAVEMENT ALONG WOODCREST DRIVE (EAST OF BRINKMAN) FROM ALBA ROAD TO END OF PROJECT.

PHASE 4 STEP 5:

1. CONSTRUCT THE PROPOSED STORM SEWER (24" RCP) ALONG MARTIN STREET.
2. CONSTRUCT THE PROPOSED CONCRETE PAVEMENT (REMAINING WIDTH) ALONG BRINKMAN LANE NB FROM MARTIN STREET TO OAK STREET.
3. CONSTRUCT THE PROPOSED ASPHALT AND CONCRETE PAVEMENT ALONG MARTIN STREET (EAST OF BRINKMAN) FROM ALBA ROAD TO END OF PROJECT.

PHASE 4 STEP 6:

1. CONSTRUCT THE PROPOSED STORM SEWER (24" RCP) ALONG OAK STREET.
2. CONSTRUCT THE PROPOSED CONCRETE PAVEMENT (REMAINING WIDTH) ALONG BRINKMAN LANE NB FROM OAK STREET TO JANISCH ROAD.
3. CONSTRUCT THE PROPOSED ASPHALT AND CONCRETE PAVEMENT ALONG OAK STREET (EAST OF BRINKMAN) FROM ALBA ROAD TO END OF PROJECT.

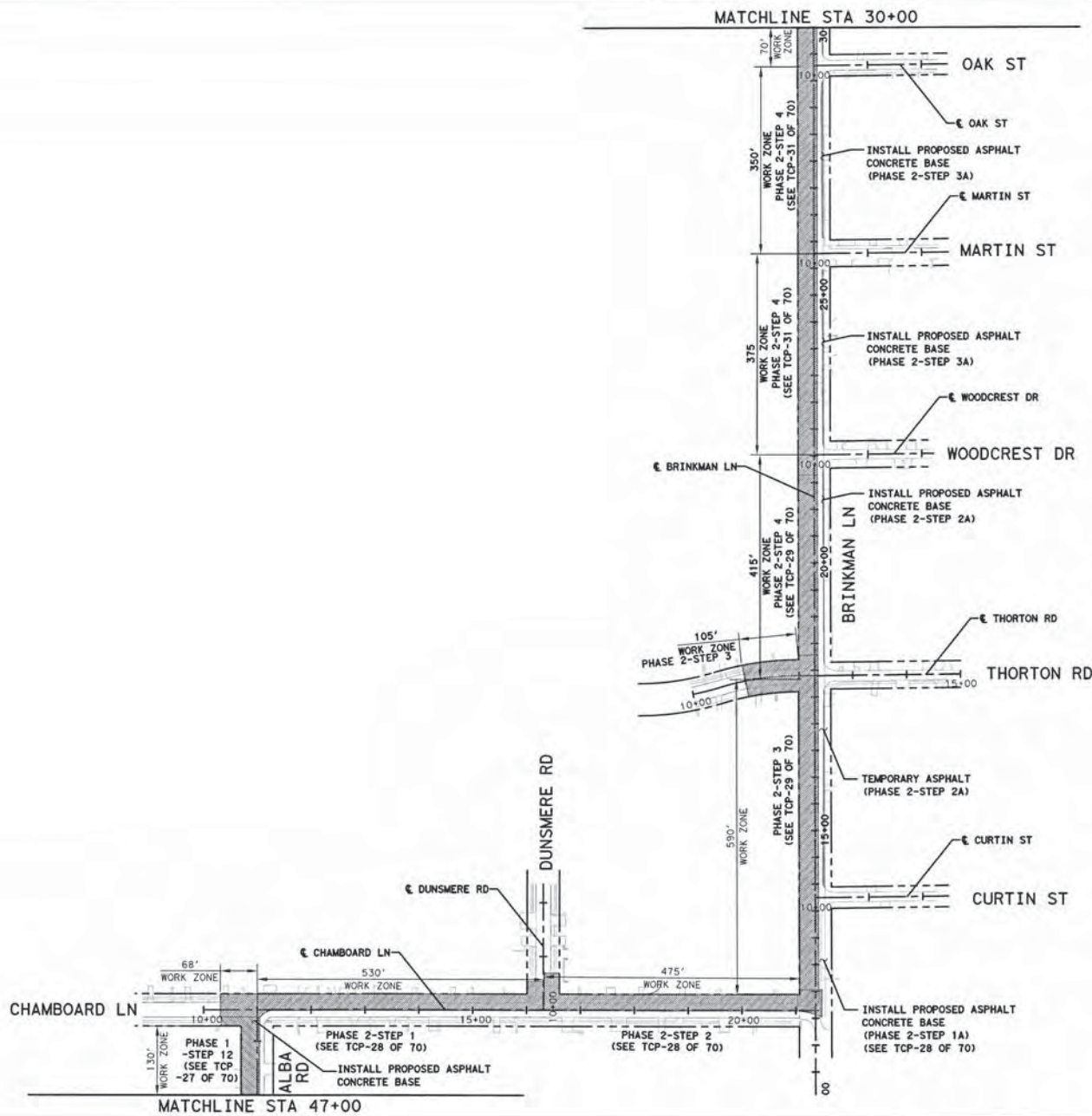
PHASE 4 STEP 7:

1. CONSTRUCT THE PROPOSED STORM SEWER (24" RCP) ALONG JANISCH ROAD.
2. CONSTRUCT THE PROPOSED CONCRETE PAVEMENT (REMAINING WIDTH) ALONG BRINKMAN LANE NB FROM JANISCH ROAD TO END OF PROJECT.
3. CONSTRUCT THE PROPOSED ASPHALT AND CONCRETE PAVEMENT ALONG JANISCH ROAD (EAST OF BRINKMAN) FROM ALBA ROAD TO END OF PROJECT.

DATE: 2/24/2016 8:30:00 AM
 PROJECT: C:\Users\jwallace\OneDrive\Documents\Traffic Control Plans\CPM\Map\CPM.dwg

 SDPS Houston Storm Drainage Program Support
 PGAL 3151 BISHOPFARM, SUITE 200 HOUSTON, TEXAS 77042 Phone: (713) 622-1414 Fax: (713) 968-9333
 iSani CONSULTANTS 3143 YELLOWSTONE BLVD. HOUSTON, TX 77054 TEL: (713) 747-2599 FAX: (713) 746-3748
 CITY OF HOUSTON DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING CONSTRUCTION NARRATIVE PHASES 3 AND 4
TPC-3A OF 70 SHEET 3 OF 3 WBS NUMBER: M-000285-0001-4 DRAWING SCALE: NTS CITY OF HOUSTON PM JEFFREY T. MALL, P.E. SHEET NO. 186A OF 385

DATE: 2/24/2016 10:58 AM
 PROJECT: C:\Users\jhall\OneDrive\Projects\Central Phase\CP6-Over\Phase 1\CP6-Over_1.dwg

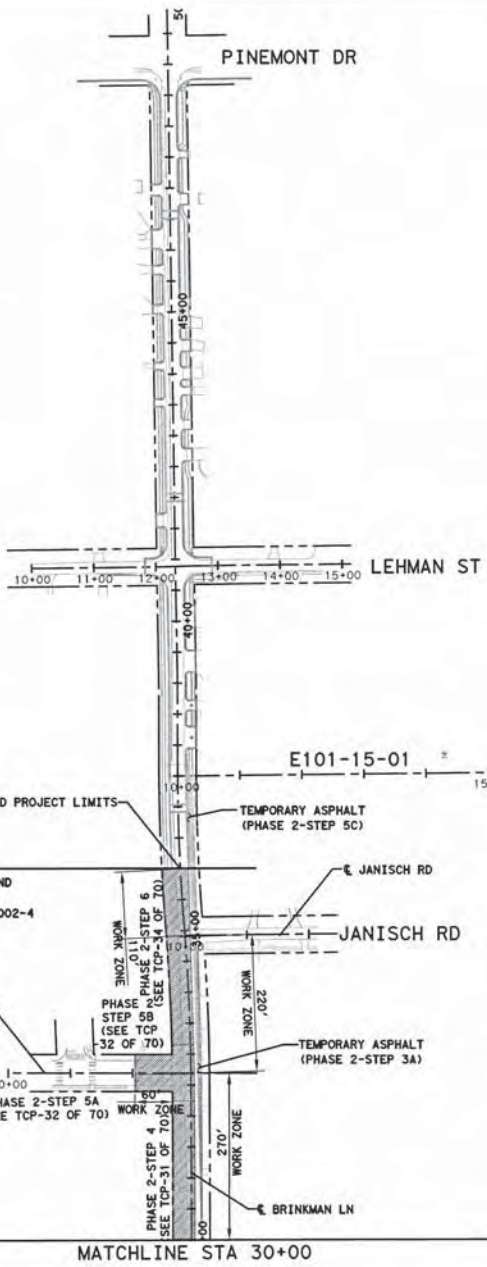


NOTES:

1. CONTRACTOR SHALL NOT CLOSE TWO (2) ADJOINING PARALLEL STREETS SIMULTANEOUSLY.
2. CONTRACTOR SHALL MAINTAIN ACCESS TO DRIVEWAYS AT ALL TIMES.
3. CONTRACTOR SHALL INSTALL LOW PROFILE CONCRETE BARRIER (LPCB) AROUND CONSTRUCTION AREAS WITH A DEPTH OF MORE THAN 4 FEET.
4. CONTRACTOR SHALL NOT CLOSE ANY TWO(2) CONSECUTIVE STREETS SIMULTANEOUSLY.
5. CONSTRUCTION AT DEAD END STREETS WILL BE PERFORMED AS TWO HALF THE WIDTH.
6. CONTRACTOR SHALL INSTALL LOW PROFILE CONCRETE BARRIER AT STORM SEWER WORK LOCATIONS. LOW PROFILE CONCRETE BARRIER TO REMAIN AT LOCATIONS WHERE ELEVATION DIFFERENCE BETWEEN THE DRIVING SURFACE AND WORK AREA EXCEEDS 18 INCHES.

- PHASE 1 STEPS 1 THRU 13
- PHASE 2 STEPS 1 THRU 6

SDPS Houston Storm Drainage Program Support	
PGAL <small>INCORPORATED</small>	3131 BRADSHAW, SUITE 200 HOUSTON, TEXAS 77044 PHONE (713) 822-1444 FAX (713) 868-8333
iSani <small>CONSULTANTS</small>	3143 YELLOWSTONE BLVD. HOUSTON, TX 77054 TEL: (713) 747-2359 FAX: (713) 748-3748 SURVEYED BY: LANDTECH PR NO. P-5576
CITY OF HOUSTON DEPARTMENT OF PUBLIC WORKS AND ENGINEERING	
GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING PROJECT PHASING LAYOUT PHASES 1 AND 2	
TCP-6 OF 70	SHEET 3 OF 6
WBS NUMBER M-000285-0001-4 DRAWING SCALE 1"=100' CITY OF HOUSTON PW JEFFREY T. HALL, P.E. SHEET NO. 189 OF 385	FOR CITY OF HOUSTON USE ONLY 55630



NOTES:

1. CONTRACTOR SHALL NOT CLOSE TWO (2) ADJOINING PARALLEL STREETS SIMULTANEOUSLY.
2. CONTRACTOR SHALL MAINTAIN ACCESS TO DRIVEWAYS AT ALL TIMES.
3. CONTRACTOR SHALL INSTALL LOW PROFILE CONCRETE BARRIER (LPCB) AROUND CONSTRUCTION AREAS WITH A DEPTH OF MORE THAN 4 FEET.
4. CONTRACTOR SHALL NOT CLOSE ANY TWO (2) CONSECUTIVE STREETS SIMULTANEOUSLY.
5. CONSTRUCTION AT DEAD END STREETS WILL BE PERFORMED AS TWO HALF THE WIDTH.
6. CONTRACTOR SHALL INSTALL LOW PROFILE CONCRETE BARRIER AT STORM SEWER WORK LOCATIONS. LOW PROFILE CONCRETE BARRIER TO REMAIN AT LOCATIONS WHERE ELEVATION DIFFERENCE BETWEEN THE DRIVING SURFACE AND WORK AREA EXCEEDS 18 INCHES.

PHASE 1 STEPS 1 THRU 13
 PHASE 2 STEPS 1 THRU 6

END PROJECT
 WBS: M-000285-0001-4
 BEGIN PROJECT
 WBS: N-000475-0002-4
 (NOT IN THIS CONTRACT)

THIS PORTION OF THE GARDEN OAKS AND
 SHEPHERD PARK (CENTRAL) WILL BE
 CONSTRUCTED UNDER WBS: N-000475-0002-4
 CONSTRUCTION PLANS

END PROJECT LIMITS
 TEMPORARY ASPHALT
 (PHASE 2-STEP 5C)
 JANISCH RD
 JANISCH RD
 TEMPORARY ASPHALT
 (PHASE 2-STEP 3A)
 BRINKMAN LN
 CANDLELIGHT LN
 PHASE 2-STEP 5A
 (SEE TCP-32 OF 70)
 PHASE 2-STEP 4
 (SEE TCP-31 OF 70)
 PHASE 2-STEP 6
 (SEE TCP-34 OF 70)
 PHASE 2-STEP 9B
 (SEE TCP-32 OF 70)

MATCHLINE STA 30+00

DATE: 2/24/2016 9:50:00 AM
 DRAWN: J. HALL
 CHECKED: J. HALL
 PROJECT: Garden Oaks Traffic Control Plans - Phase 1, 2 & 3

SDPS
Houston Storm Drainage
Program Support

PGAL
No. 1-2512

5151 BRAYFARL, SUITE 200
 Houston, Texas 77042
 Phone: (713) 623-4444
 Fax: (713) 698-9333

iSani
CONCRETE
CONSTRUCTION SERVICES
SPE FIRM NO. F-4575
3143 YELLOWSTONE BLVD.
HOUSTON, TX 77054
TEL: (713) 747-2399
FAX: (713) 748-3748

2/24/2016

SUPERVISED BY: LANDTECH
PR NO. 16-0516

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

**GARDEN OAKS AND
SHEPHERD PARK (CENTRAL)
DRAINAGE AND PAVING**

**PROJECT PHASING LAYOUT
PHASES 1 AND 2**

TCP-7 OF 70

WBS NUMBER
M-000285-0001-4

DRAWING SCALE
1"=100'

CITY OF HOUSTON PM
JEFFREY T. HALL, P.E.

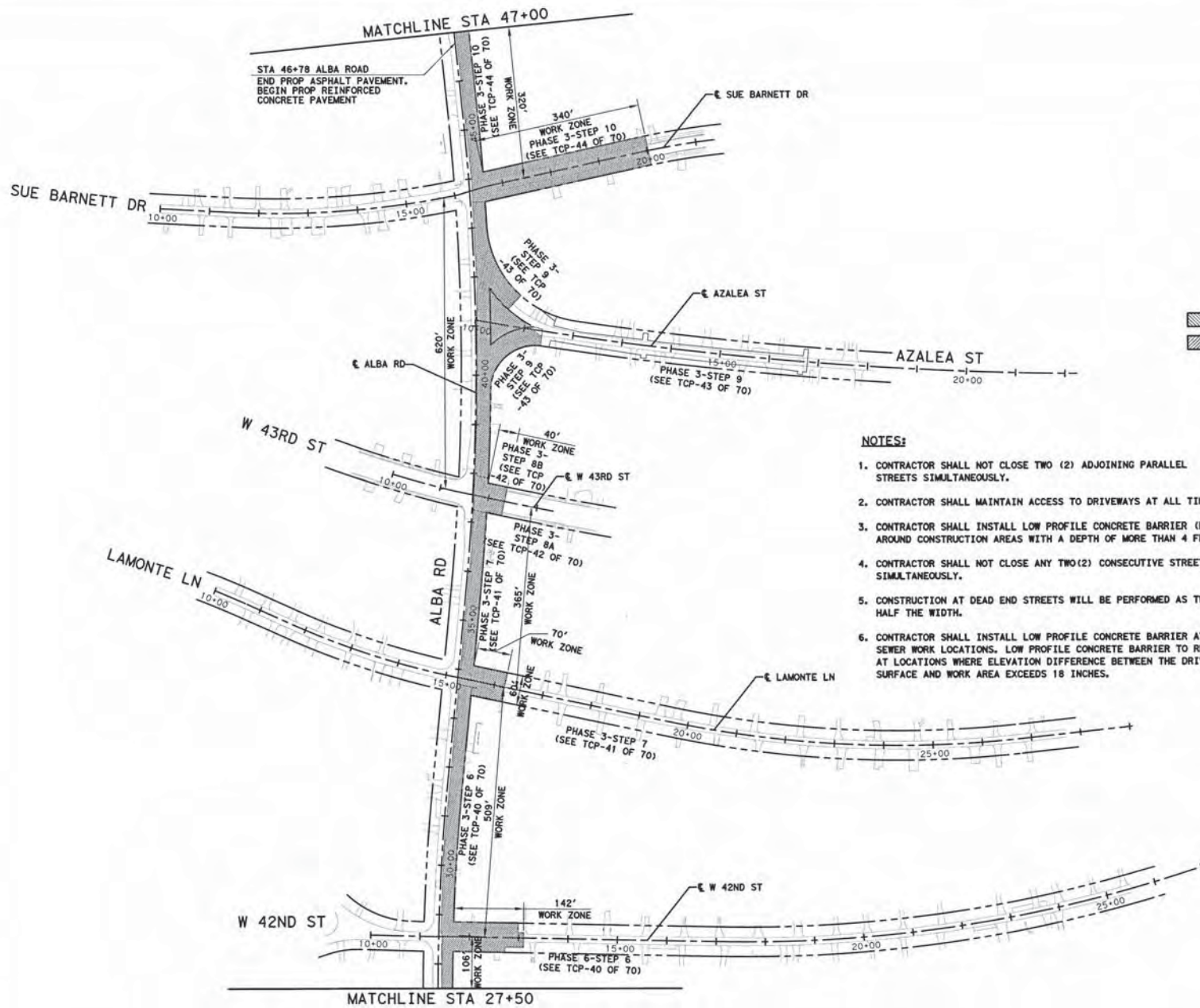
SHEET NO. 190 OF 385

SHEET 4 OF 8

FOR CITY OF HOUSTON
USE ONLY

55630

DATE: 2/24/2016 9:30:4 AM
 PROJECT: SDPS/Stormwater/Traffic Control Phases 3, 4, 6-Step 2.dgn



PHASE 3 STEPS 1 THRU 10
 PHASE 4 STEPS 1 THRU 7

NOTES:

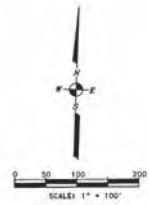
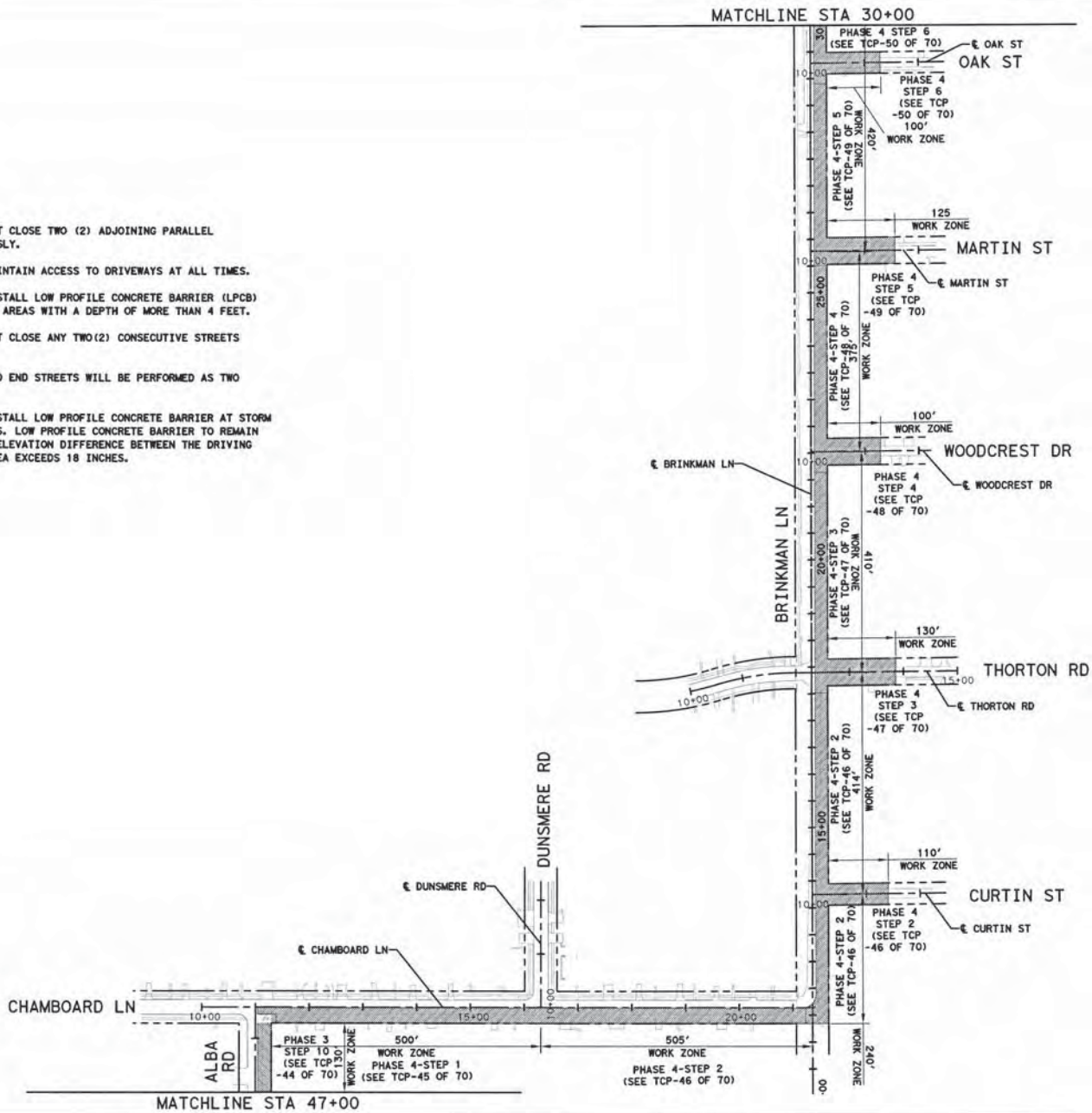
1. CONTRACTOR SHALL NOT CLOSE TWO (2) ADJOINING PARALLEL STREETS SIMULTANEOUSLY.
2. CONTRACTOR SHALL MAINTAIN ACCESS TO DRIVEWAYS AT ALL TIMES.
3. CONTRACTOR SHALL INSTALL LOW PROFILE CONCRETE BARRIER (LPCB) AROUND CONSTRUCTION AREAS WITH A DEPTH OF MORE THAN 4 FEET.
4. CONTRACTOR SHALL NOT CLOSE ANY TWO (2) CONSECUTIVE STREETS SIMULTANEOUSLY.
5. CONSTRUCTION AT DEAD END STREETS WILL BE PERFORMED AS TWO HALF THE WIDTH.
6. CONTRACTOR SHALL INSTALL LOW PROFILE CONCRETE BARRIER AT STORM SEWER WORK LOCATIONS. LOW PROFILE CONCRETE BARRIER TO REMAIN AT LOCATIONS WHERE ELEVATION DIFFERENCE BETWEEN THE DRIVING SURFACE AND WORK AREA EXCEEDS 18 INCHES.

 SDPS Houston Storm Drainage Program Support	
 PGAL <small>PROFESSIONAL GEOTECHNICAL ENGINEERS</small>	3131 BRANIFF AVE, SUITE 200 HOUSTON, TEXAS 77042 PHONE (713) 622-1444 FAX (713) 666-8333
 iSani <small>CONTRACTORS</small> <small>Stormwater Construction Managers</small>	TYPE FORM NO. F-4575 3143 YELLOWSTONE BLVD. HOUSTON, TX 77054 TEL. (713) 747-2389 FAX. (713) 746-3748 SURVEYED BY: LANDTECH FB NO. P-4557E 2/24/2016
CITY OF HOUSTON DEPARTMENT OF PUBLIC WORKS AND ENGINEERING	
GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING PROJECT PHASING LAYOUT PHASES 3 AND 4	
TCP-9 OF 70 WBS NUMBER M-000285-0001-4 DRAWING SCALE 1"=100' CITY OF HOUSTON PM JEFFREY T. HALL, P.E. SHEET NO. 192 OF 385	SHEET 6 OF 8 FOR CITY OF HOUSTON USE ONLY. 55630

Garden Oaks_Traffic Control Phases_0001_Submittal

NOTES:

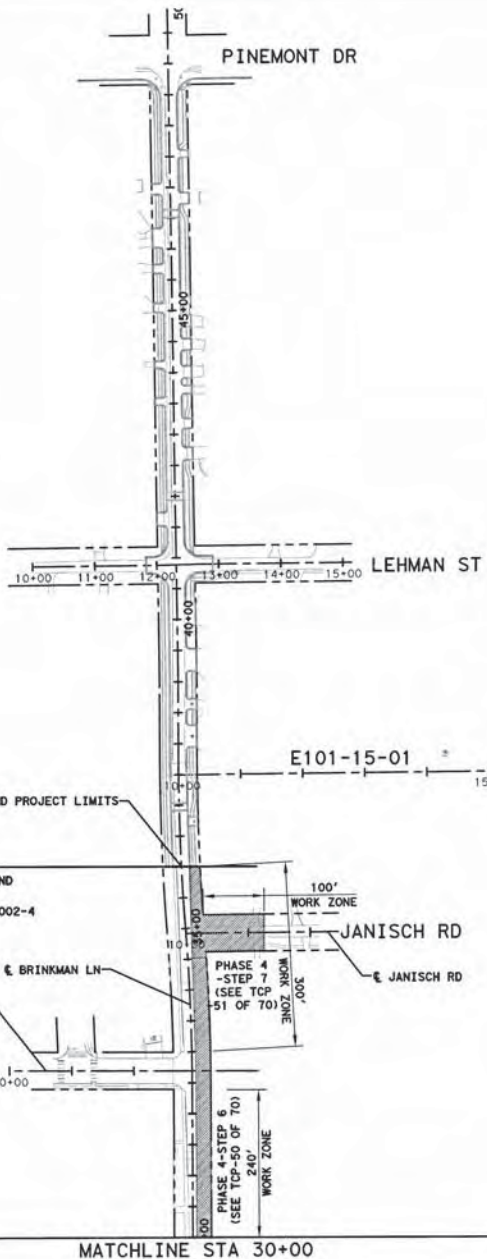
1. CONTRACTOR SHALL NOT CLOSE TWO (2) ADJOINING PARALLEL STREETS SIMULTANEOUSLY.
2. CONTRACTOR SHALL MAINTAIN ACCESS TO DRIVEWAYS AT ALL TIMES.
3. CONTRACTOR SHALL INSTALL LOW PROFILE CONCRETE BARRIER (LPCB) AROUND CONSTRUCTION AREAS WITH A DEPTH OF MORE THAN 4 FEET.
4. CONTRACTOR SHALL NOT CLOSE ANY TWO(2) CONSECUTIVE STREETS SIMULTANEOUSLY.
5. CONSTRUCTION AT DEAD END STREETS WILL BE PERFORMED AS TWO HALF THE WIDTH.
6. CONTRACTOR SHALL INSTALL LOW PROFILE CONCRETE BARRIER AT STORM SEWER WORK LOCATIONS. LOW PROFILE CONCRETE BARRIER TO REMAIN AT LOCATIONS WHERE ELEVATION DIFFERENCE BETWEEN THE DRIVING SURFACE AND WORK AREA EXCEEDS 18 INCHES.



- PHASE 3 STEPS 1 THRU 10
- PHASE 4 STEPS 1 THRU 7

SDPS Houston Storm Drainage Program Support	
PGAL <small>NO. P. 252</small>	3131 BELLEVUE, SUITE 200 HOUSTON, TEXAS 77042 PHONE: (713) 822-1444 FAX: (713) 856-9333
iSant <small>CONTRACTORS</small> 3143 YELLOWSTONE BLVD. HOUSTON, TX 77054 TEL: (713) 747-2389 FAX: (713) 746-3748	 SURVEYED BY: LANDTECH P.E. NO. P-9376 2/24/2016
CITY OF HOUSTON DEPARTMENT OF PUBLIC WORKS AND ENGINEERING	
GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING PROJECT PHASING LAYOUT PHASES 3 AND 4	
TCP-10 OF 70	SHEET 7 OF 8
WBS NUMBER M-000285-0001-4	FOR CITY OF HOUSTON USE ONLY
DRAWING SCALE 1"=100'	
CITY OF HOUSTON PM JEFFREY T. HALL, P. E.	SHEET NO. 193 OF 385

DATE: 2/24/2016 9:50:56 AM
 P:\MKTG\GARDEN OAKS\Drawings\Traffic Control Plans\Phase 3_4.dwg 1.dwg



END PROJECT
 WBS: M-000285-0001-4
 BEGIN PROJECT
 WBS: N-000475-0002-4
 (NOT IN THIS CONTRACT)

THIS PORTION OF THE GARDEN OAKS AND SHEPHERD PARK (CENTRAL) WILL BE CONSTRUCTED UNDER WBS: N-000475-0002-4 CONSTRUCTION PLANS

NOTES:

1. CONTRACTOR SHALL NOT CLOSE TWO (2) ADJOINING PARALLEL STREETS SIMULTANEOUSLY.
2. CONTRACTOR SHALL MAINTAIN ACCESS TO DRIVEWAYS AT ALL TIMES.
3. CONTRACTOR SHALL INSTALL LOW PROFILE CONCRETE BARRIER (LPCB) AROUND CONSTRUCTION AREAS WITH A DEPTH OF MORE THAN 4 FEET.
4. CONTRACTOR SHALL NOT CLOSE ANY TWO (2) CONSECUTIVE STREETS SIMULTANEOUSLY.
5. CONSTRUCTION AT DEAD END STREETS WILL BE PERFORMED AS TWO HALF THE WIDTH.
6. CONTRACTOR SHALL INSTALL LOW PROFILE CONCRETE BARRIER AT STORM SEWER WORK LOCATIONS. LOW PROFILE CONCRETE BARRIER TO REMAIN AT LOCATIONS WHERE ELEVATION DIFFERENCE BETWEEN THE DRIVING SURFACE AND WORK AREA EXCEEDS 18 INCHES.

PHASE 3 STEPS 1 THRU 10
 PHASE 4 STEPS 1 THRU 7



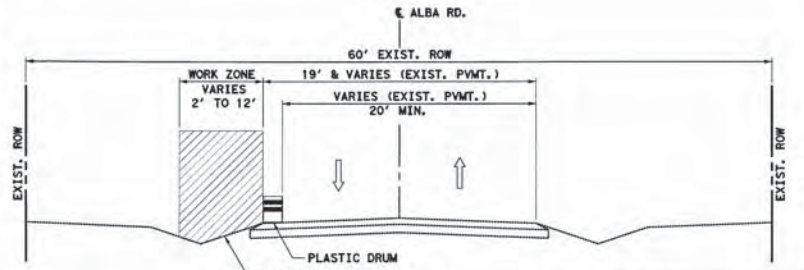
<p>SDPS Houston Storm Drainage Program Support</p>	
<p>PGAL TYPE 955 NO. P-292</p>	
<p>iSani CONSULTANTS Storm & Sanitary Engineers TYPE FIRM NO. F-4075 3143 YELLOWSTONE BLVD. HOUSTON, TX 77054 TEL: (713) 747-2399 FAX: (713) 748-3748</p>	<p>2/24/2016</p>
<p>SURVEYED BY: LANDTECH FIRM NO.: P-5576</p>	
<p>CITY OF HOUSTON DEPARTMENT OF PUBLIC WORKS AND ENGINEERING</p>	
<p>GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING PROJECT PHASING LAYOUT PHASES 3 AND 4</p>	
TCP-11 OF 70	SHEET 8 OF 8
WBS NUMBER M-000285-0001-4 DRAWING SCALE 1"=100' CITY OF HOUSTON PM JEFFREY T. HALL, P.E. SHEET NO. 194 OF 385	FOR CITY OF HOUSTON USE ONLY <p>55630</p>

DATE: 01/24/2016 9:56:07 AM
 P:\ACT\15030000\Garden Oaks\Traffic\Central Plans\TCP-11 of 70.dwg
 Scale: 1" = 100'

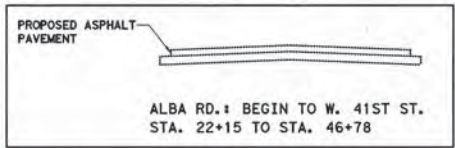


LEGEND:

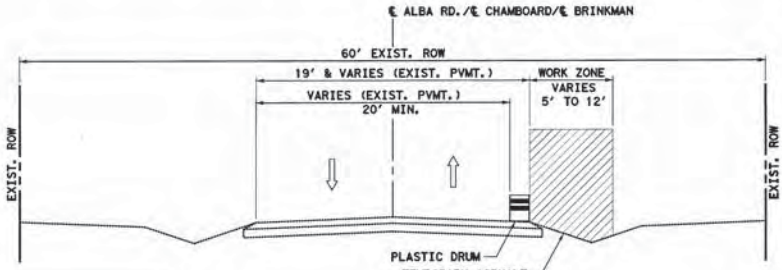
- PERMANENT CONSTRUCTION WORK ZONE (PATTERN VARIES)
- PERMANENT CONSTRUCTION (PREVIOUS STEP)
- TEMPORARY ASPHALT PAVEMENT
- PLASTIC DRUM, CONE, OR TUBULAR MARKER
- PROPOSED SIGN POST
- 1 TYPE III BARRICADE
- PROPOSED TRAFFIC FLOW
- EXISTING TRAFFIC FLOW
- 2 LOW PROFILE CONCRETE BARRIER (LPCB) (TY 1 AND TY 2)
- 3PD PLASTIC DRUM (DRUM) (SEE LEGEND SP FOR SPACING)
- 4CL DRUM WITH CHEVRON (CW1-8) ON EVERY OTHER DRUM (LEFT) (SEE LEGEND SP FOR SPACING)
- 4CR DRUM WITH CHEVRON (CW1-8) ON EVERY OTHER DRUM (RIGHT) (SEE LEGEND SP FOR SPACING)
- 5VP DRUM WITH VERTICAL PANEL (SEE LEGEND SP FOR SPACING)
- 6MC TUBULAR MARKERS OR TRAFFIC CONES (SEE LEGEND SP FOR SPACING)



PHASE 1 STEP 1
ALBA RD.: BEGIN TO W. 41ST ST.

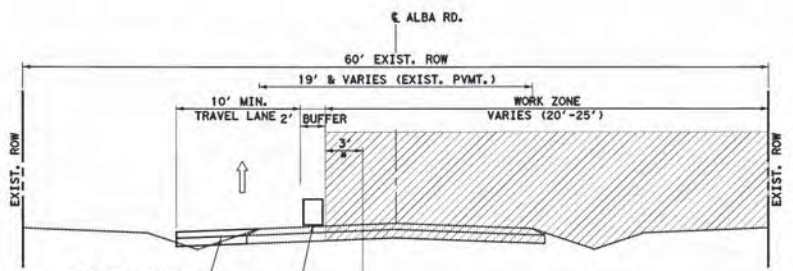


ALBA RD.: BEGIN TO W. 41ST ST.
STA. 22+15 TO STA. 46+78

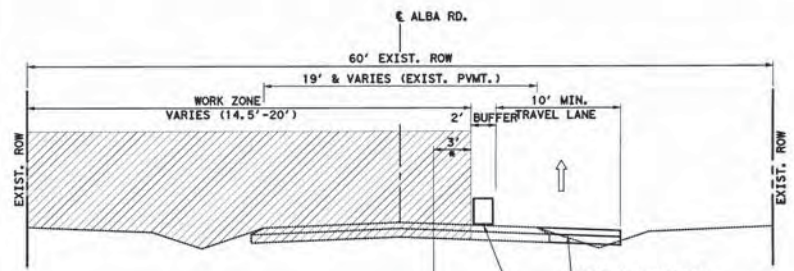


PHASE 1 STEPS 4A, 7A, 8A AND 11C
PHASE 2 STEPS 2A, 3A AND 5C

ALBA RD.: W. 41ST ST. TO CHAMBOARD LN.
CHAMBOARD LN.: ALBA RD. TO BRINKMAN LN.
BRINKMAN LN.: CHAMBOARD LN. TO END PROJECT



PHASE 1 STEP 2
ALBA RD.: PROJECT BEGIN TO W. 41ST ST.



PROP. RCB
(12'X10'-41ST ST. TO 43RD ST.)
(10'X10'-43RD ST. TO CHAMBOARD)
(10'X8'-ALONG CHAMBOARD)
(8'X5'-ALONG BRINKMAN)

PHASE 1 STEPS 8 THRU 13
PHASE 2 STEPS 1 THRU 6

ALBA RD.: W. 41ST ST. TO CHAMBOARD LN.
CHAMBOARD LN.: ALBA RD. TO BRINKMAN LN.
BRINKMAN LN.: CHAMBOARD LN. TO END PROJECT

2' FOR 12'X10' AND 10'X5' RCB'S

- LEGEND:**
- TRAILER MOUNTED FLASHING ARROW PANEL (FAP)
 - SP SPACED # 20' C-C (ALONG WORK ZONE & TAPERS)
 - SPACED # 5' C-C (AT INTERSECTIONS & ON RADII)
 - A WRK ZN PAV MRK 4" SOLID WHITE (REMOV)
 - B WRK ZN PAV MRK 4" SOLID YELLOW (REMOV)
 - C WRK ZN PAV MRK 24" SOLID WHITE (REMOV)
 - D WRK ZN PAV MRK 8" DASHED WHITE (CAT-TRACK) (REMOV)

SEE PROPOSED TYPICAL SECTIONS SHEETS FOR ADDITIONAL DETAILS ON:

1. PROPOSED PAVEMENT AND SUBGRADE THICKNESS
2. PROPOSED PAVEMENT WIDTHS AND CONFIGURATION
3. PROPOSED SIDEWALK AND OTHER DETAILS

NOTES:

1. CONTRACTOR SHALL INSTALL LOW PROFILE CONCRETE BARRIER AT STORM SEWER WORK LOCATIONS. LOW PROFILE CONCRETE BARRIER TO REMAIN AT LOCATIONS WHERE ELEVATION DIFFERENCE BETWEEN THE DRIVING SURFACE AND WORK AREA EXCEEDS 18 INCHES.

SDPS
Houston Storm Drainage Program Support

PGAL
3111 BISHOPDAVE, SUITE 200
HOUSTON, TEXAS 77042
Phone (713) 822-1444
Fax (713) 868-9333

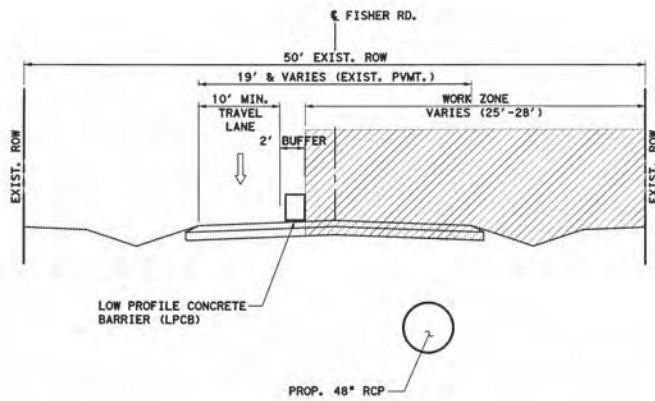
iSani CONSULTANTS
3143 YELLOWSTONE BLVD.
HOUSTON, TX 77054
TEL (713) 747-2369
FAX (713) 748-3748

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING TRAFFIC CONTROL PLAN TYPICAL SECTIONS

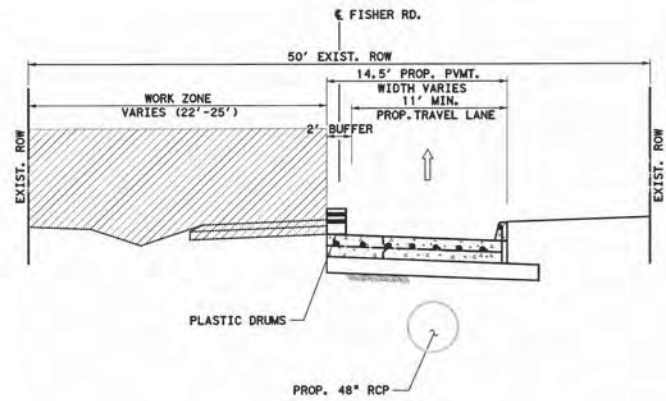
TCP-12 OF 70 SHEET 1 OF 3

WBS NUMBER M-000285-0001-4
DRAWING SCALE 1"=5'
CITY OF HOUSTON PM JEFFREY T. HALL, P.E.
SHEET NO. 195 OF 385



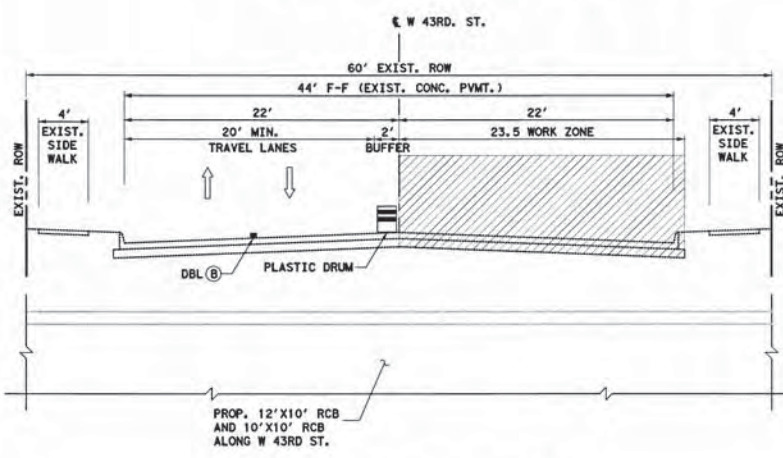
**PHASE 1 STEP 3
PHASE 2 STEP 5A**

FISHER DR. EB: ALBA RD. TO END PROJECT
CANDLELIGHT LN.: BRINKMAN LN. TO END PROJECT

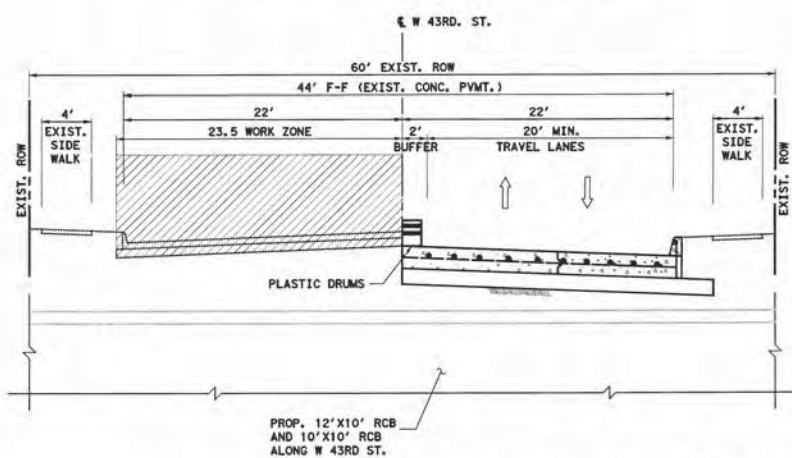


**PHASE 1 STEP 4
PHASE 2 STEP 5B**

FISHER DR. WB: ALBA RD. TO END PROJECT
CANDLELIGHT LN.: BRINKMAN LN. TO END PROJECT



**PHASE 1 STEP 10A AND PHASE 3 STEP 8A
STEP 2 (W. 43RD ST. AND ALBA)**



**PHASE 1 STEP 10B AND PHASE 3 STEP 8B
STEP 3 (W. 43RD ST. AND ALBA)**



LEGEND:

- PERMANENT CONSTRUCTION WORK ZONE (PATTERN VARIES)
- PERMANENT CONSTRUCTION (PREVIOUS STEP)
- TEMPORARY ASPHALT PAVEMENT
- PLASTIC DRUM, CONE, OR TUBULAR MARKER
- PROPOSED SIGN POST
- TYPE III BARRICADE
- PROPOSED TRAFFIC FLOW
- EXISTING TRAFFIC FLOW
- LOW PROFILE CONCRETE BARRIER (LPCB) (TY 1 AND TY 2)
- PLASTIC DRUM (DRUM) (SEE LEGEND SP FOR SPACING)
- DRUM WITH CHEVRON (CW1-8) ON EVERY OTHER DRUM (LEFT) (SEE LEGEND SP FOR SPACING)
- DRUM WITH CHEVRON (CW1-8) ON EVERY OTHER DRUM (RIGHT) (SEE LEGEND SP FOR SPACING)
- DRUM WITH VERTICAL PANEL (SEE LEGEND SP FOR SPACING)
- TUBULAR MARKERS OR TRAFFIC CONES (SEE LEGEND SP FOR SPACING)

LEGEND:

- TRAILER MOUNTED FLASHING ARROW PANEL (FAP)
- SPACED # 20' C-C (ALONG WORK ZONE & TAPERS)
- SPACED # 5' C-C (AT INTERSECTIONS & ON RADIUS)
- WRK ZN PAV MRK 4" SOLID WHITE (REMOV)
- WRK ZN PAV MRK 4" SOLID YELLOW (REMOV)
- WRK ZN PAV MRK 24" SOLID WHITE (REMOV)
- WRK ZN PAV MRK 8" DASHED WHITE (CAT-TRACK) (REMOV)

NOTES:

1. CONTRACTOR SHALL INSTALL LOW PROFILE CONCRETE BARRIER AT STORM SEWER WORK LOCATIONS. LOW PROFILE CONCRETE BARRIER TO REMAIN AT LOCATIONS WHERE ELEVATION DIFFERENCE BETWEEN THE DRIVING SURFACE AND WORK AREA EXCEEDS 18 INCHES.

SEE PROPOSED TYPICAL SECTIONS SHEETS FOR ADDITIONAL DETAILS ON:

1. PROPOSED PAVEMENT AND SUBGRADE THICKNESS
2. PROPOSED PAVEMENT WIDTHS AND CONFIGURATION
3. PROPOSED SIDEWALK AND OTHER DETAILS

SDPS
Houston Storm Drainage Program Support

PGAL
3131 BRINKMAN, SUITE 200
HOUSTON, TEXAS 77044
Phone: (713) 622-4444
Fax: (713) 668-8333

ESANI
CONSTRUCTORS
3143 YELLOWSTONE BLVD.
HOUSTON, TX 77054
TEL: (713) 747-2399
FAX: (713) 746-3746

2/24/2016

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

TRAFFIC CONTROL PLAN
TYPICAL SECTIONS

TCP-13 OF 70 SHEET 2 OF 3

FOR CITY OF HOUSTON USE ONLY

DRAWING SCALE
1" = 5'

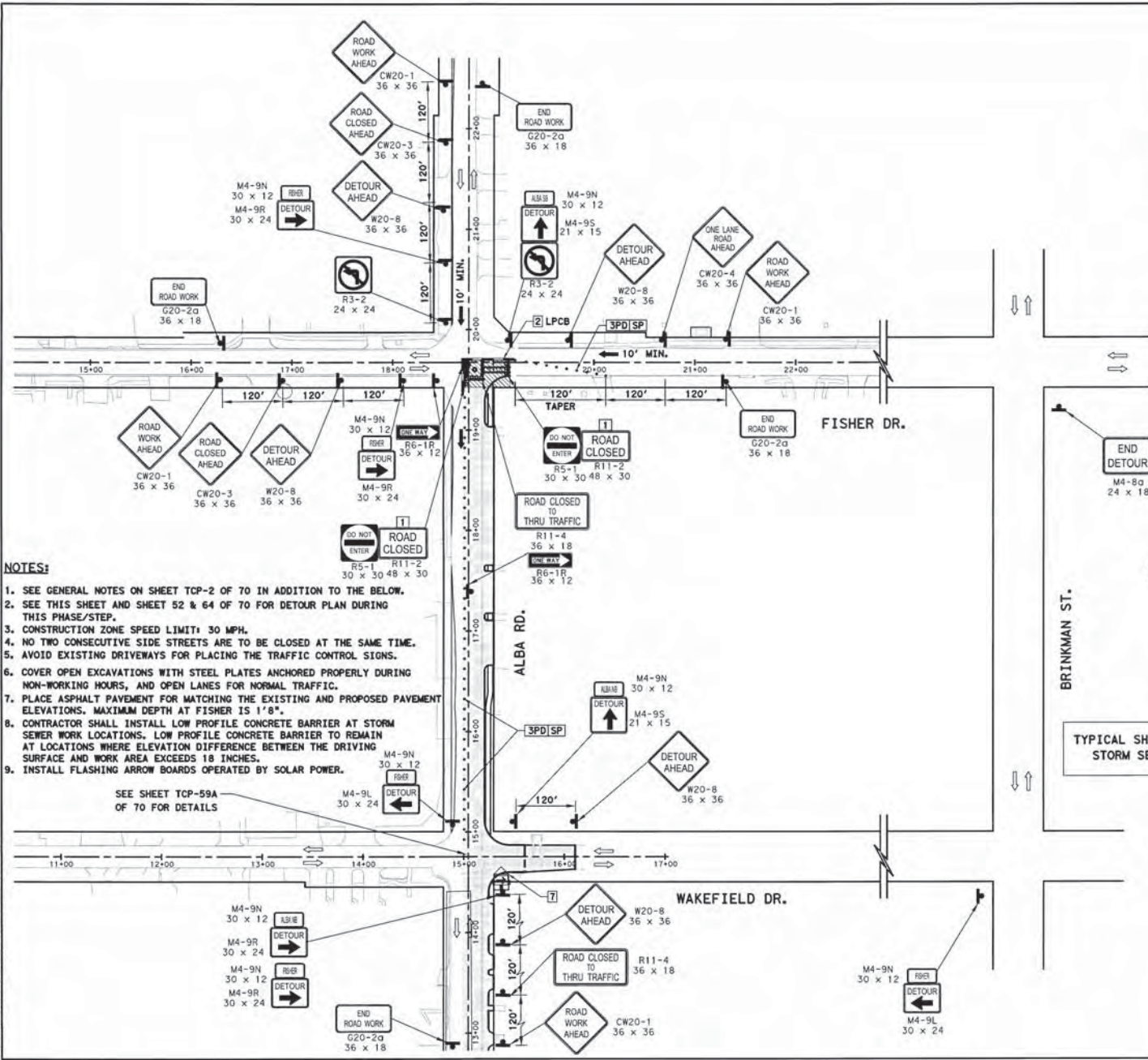
55630

CITY OF HOUSTON PW
JEFFREY T. HALL, P.E.
SHEET NO. 196 OF 385

DATE: 2/24/2016 8:30:59 AM
P:\ACT\15\15056\Drawings\Traffic Control Plans\TCP-13 Typical Section-2Sheet.rvt 3.dwg



- LEGEND:**
- PERMANENT CONSTRUCTION WORK ZONE (PATTERN VARIES)
 - PERMANENT CONSTRUCTION (PREVIOUS STEP)
 - TEMPORARY ASPHALT PAVEMENT
 - PLASTIC DRUM, CONE, OR TUBULAR MARKER
 - PROPOSED SIGN POST
 - TYPE III BARRICADE
 - PROPOSED TRAFFIC FLOW
 - EXISTING TRAFFIC FLOW
 - LOW PROFILE CONCRETE BARRIER (LPCB) (TY 1 AND TY 2)
 - PLASTIC DRUM (DRUM) (SEE LEGEND SP FOR SPACING)
 - DRUM WITH CHEVRON (CW-8) ON EVERY OTHER DRUM (LEFT) (SEE LEGEND SP FOR SPACING)
 - DRUM WITH CHEVRON (CW-8) ON EVERY OTHER DRUM (RIGHT) (SEE LEGEND SP FOR SPACING)
 - DRUM WITH VERTICAL PANEL (SEE LEGEND SP FOR SPACING)
 - TUBULAR MARKERS OR TRAFFIC CONES (SEE LEGEND SP FOR SPACING)



- NOTES:**
1. SEE GENERAL NOTES ON SHEET TCP-2 OF 70 IN ADDITION TO THE BELOW.
 2. SEE THIS SHEET AND SHEET 52 & 64 OF 70 FOR DETOUR PLAN DURING THIS PHASE/STEP.
 3. CONSTRUCTION ZONE SPEED LIMIT: 30 MPH.
 4. NO TWO CONSECUTIVE SIDE STREETS ARE TO BE CLOSED AT THE SAME TIME.
 5. AVOID EXISTING DRIVEWAYS FOR PLACING THE TRAFFIC CONTROL SIGNS.
 6. COVER OPEN EXCAVATIONS WITH STEEL PLATES ANCHORED PROPERLY DURING NON-WORKING HOURS, AND OPEN LANES FOR NORMAL TRAFFIC.
 7. PLACE ASPHALT PAVEMENT FOR MATCHING THE EXISTING AND PROPOSED PAVEMENT ELEVATIONS. MAXIMUM DEPTH AT FISHER IS 1'8".
 8. CONTRACTOR SHALL INSTALL LOW PROFILE CONCRETE BARRIER AT STORM SEWER WORK LOCATIONS. LOW PROFILE CONCRETE BARRIER TO REMAIN AT LOCATIONS WHERE ELEVATION DIFFERENCE BETWEEN THE DRIVING SURFACE AND WORK AREA EXCEEDS 18 INCHES.
 9. INSTALL FLASHING ARROW BOARDS OPERATED BY SOLAR POWER.

SEE SHEET TCP-59A OF 70 FOR DETAILS

TYPICAL SHEET (TYP-A) FOR CONSTRUCTION OF STORM SEWER AT INTERSECTION QUADRANT

PHASE 1 STEP 3A

- LEGEND:**
- TRAILER MOUNTED FLASHING ARROW PANEL (FAP)
 - SPACED @ 20' C-C (ALONG WORK ZONE & TAPERS)
 - WRK ZN PAV MRK 4" SOLID WHITE (REMOV)
 - WRK ZN PAV MRK 4" SOLID YELLOW (REMOV)
 - WRK ZN PAV MRK 24" SOLID WHITE (REMOV)
 - WRK ZN PAV MRK 8" DASHED WHITE (CAT-TRACK) (REMOV)

SDPS
Houston Storm Drainage Program Support

PGAL
3131 BIRCHDALE, SUITE 200
HOUSTON, TEXAS 77054
PHONE: (713) 822-1444
FAX: (713) 968-9333

iSant
CONTRACTORS
3143 YELLOWSTONE BLVD.
HOUSTON, TX 77054
TEL: (713) 747-2369
FAX: (713) 746-3746

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

TRAFFIC CONTROL PLAN
PHASE 1 STEP 3A
(TYP-A)

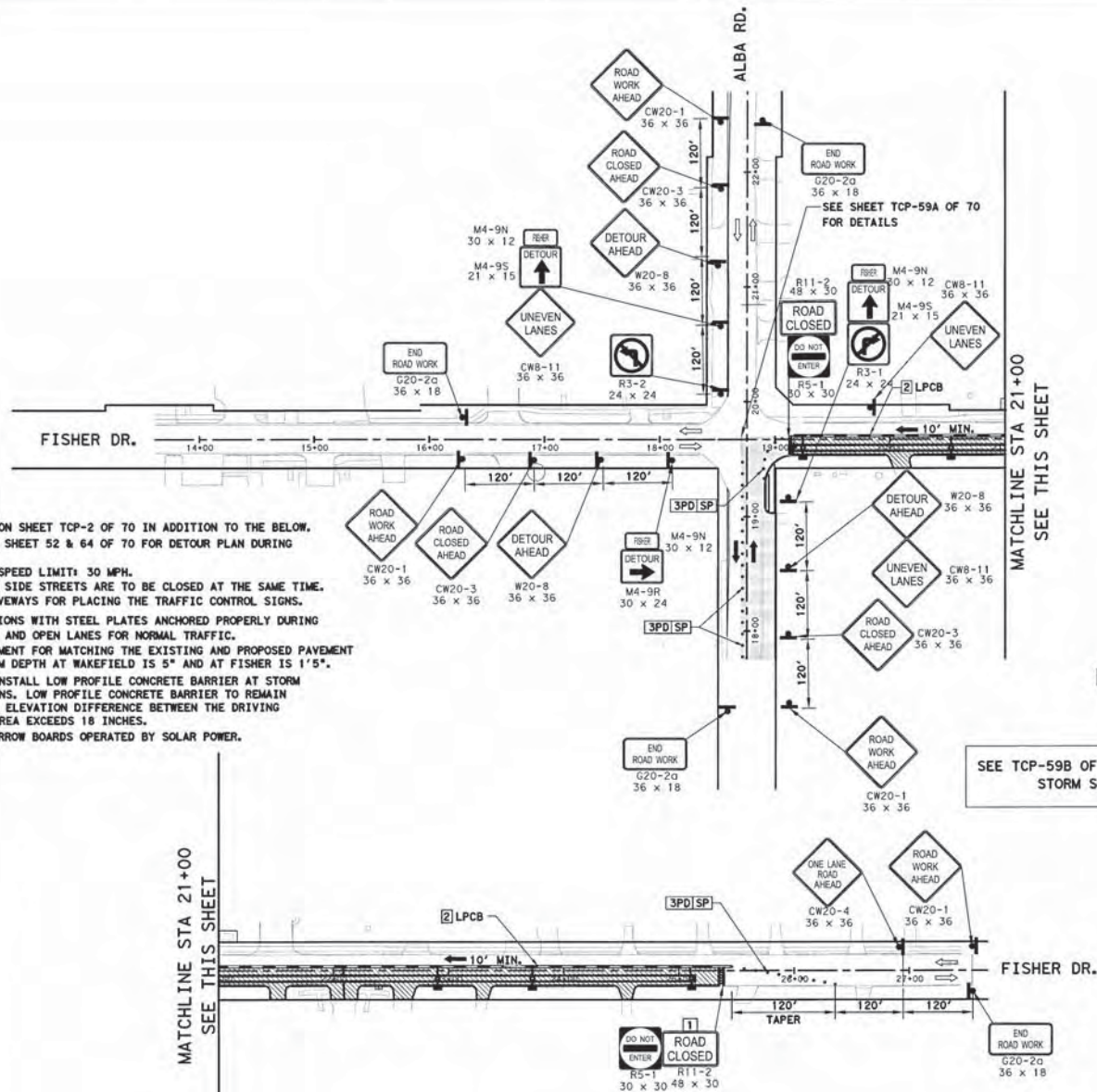
TCP-17 OF 70 SHEET 3 OF 13

WBS NUMBER: M-000285-0001-4
DRAWING SCALE: 1"=50'
CITY OF HOUSTON PM: JEFFREY T. HALL, P.E.
SHEET NO. 200 OF 385

FOR CITY OF HOUSTON USE ONLY
55630

Garden Oaks_Traffic Control Phase_0001_Submittal

DATE: 2/24/2016
DRAWN BY: J. HALL
CHECKED BY: J. HALL
PROJECT: Garden Oaks_Traffic Control Phase_0001_Submittal



NOTES:

1. SEE GENERAL NOTES ON SHEET TCP-2 OF 70 IN ADDITION TO THE BELOW.
2. SEE THIS SHEET AND SHEET 52 & 64 OF 70 FOR DETOUR PLAN DURING THIS PHASE/STEP.
3. CONSTRUCTION ZONE SPEED LIMIT: 30 MPH.
4. NO TWO CONSECUTIVE SIDE STREETS ARE TO BE CLOSED AT THE SAME TIME.
5. AVOID EXISTING DRIVEWAYS FOR PLACING THE TRAFFIC CONTROL SIGNS.
6. COVER OPEN EXCAVATIONS WITH STEEL PLATES ANCHORED PROPERLY DURING NON-WORKING HOURS, AND OPEN LANES FOR NORMAL TRAFFIC.
7. PLACE ASPHALT PAVEMENT FOR MATCHING THE EXISTING AND PROPOSED PAVEMENT ELEVATIONS. MAXIMUM DEPTH AT WAKEFIELD IS 5" AND AT FISHER IS 1'5".
8. CONTRACTOR SHALL INSTALL LOW PROFILE CONCRETE BARRIER AT STORM SEWER WORK LOCATIONS. LOW PROFILE CONCRETE BARRIER TO REMAIN AT LOCATIONS WHERE ELEVATION DIFFERENCE BETWEEN THE DRIVING SURFACE AND WORK AREA EXCEEDS 18 INCHES.
9. INSTALL FLASHING ARROW BOARDS OPERATED BY SOLAR POWER.



LEGEND:

- PERMANENT CONSTRUCTION WORK ZONE (PATTERN VARIES)
- PERMANENT CONSTRUCTION (PREVIOUS STEP)
- TEMPORARY ASPHALT PAVEMENT
- PLASTIC DRUM, CONE, OR TUBULAR MARKER
- PROPOSED SIGN POST
- TYPE III BARRICADE
- PROPOSED TRAFFIC FLOW
- EXISTING TRAFFIC FLOW
- LOW PROFILE CONCRETE BARRIER (LPCB) (TY 1 AND TY 2)
- PLASTIC DRUM (DRUM) (SEE LEGEND SP FOR SPACING)
- DRUM WITH CHEVRON (CW1-8) ON EVERY OTHER DRUM (LEFT) (SEE LEGEND SP FOR SPACING)
- DRUM WITH CHEVRON (CW1-8) ON EVERY OTHER DRUM (RIGHT) (SEE LEGEND SP FOR SPACING)
- DRUM WITH VERTICAL PANEL (SEE LEGEND SP FOR SPACING)
- TUBULAR MARKERS OR TRAFFIC CONES (SEE LEGEND SP FOR SPACING)

PHASE 1 STEP 3

SEE TCP-59B OF 70 (TYP-7A) CONSTRUCTION OF STORM SEWER AND HALF PAYMENT

LEGEND:

- TRAILER MOUNTED FLASHING ARROW PANEL (FAP)
- SPACED # 20' C-C (ALONG WORK ZONE & TAPERS)
- SPACED # 5' C-C (AT INTERSECTIONS & ON RADIUS)
- WRK ZN PAV MRK 4" SOLID WHITE (REMOV)
- WRK ZN PAV MRK 4" SOLID YELLOW (REMOV)
- WRK ZN PAV MRK 24" SOLID WHITE (REMOV)
- WRK ZN PAV MRK 8" DASHED WHITE (CAT-TRACK) (REMOV)

SDPS
Houston Storm Drainage Program Support

PGAL
3143 YELLOWSTONE BLVD.
HOUSTON, TX 77054
TEL: (713) 747-3389
FAX: (713) 749-3748

isanti
CONSULTANTS
3143 YELLOWSTONE BLVD.
HOUSTON, TX 77054
TEL: (713) 747-3389
FAX: (713) 749-3748
2/24/2016

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

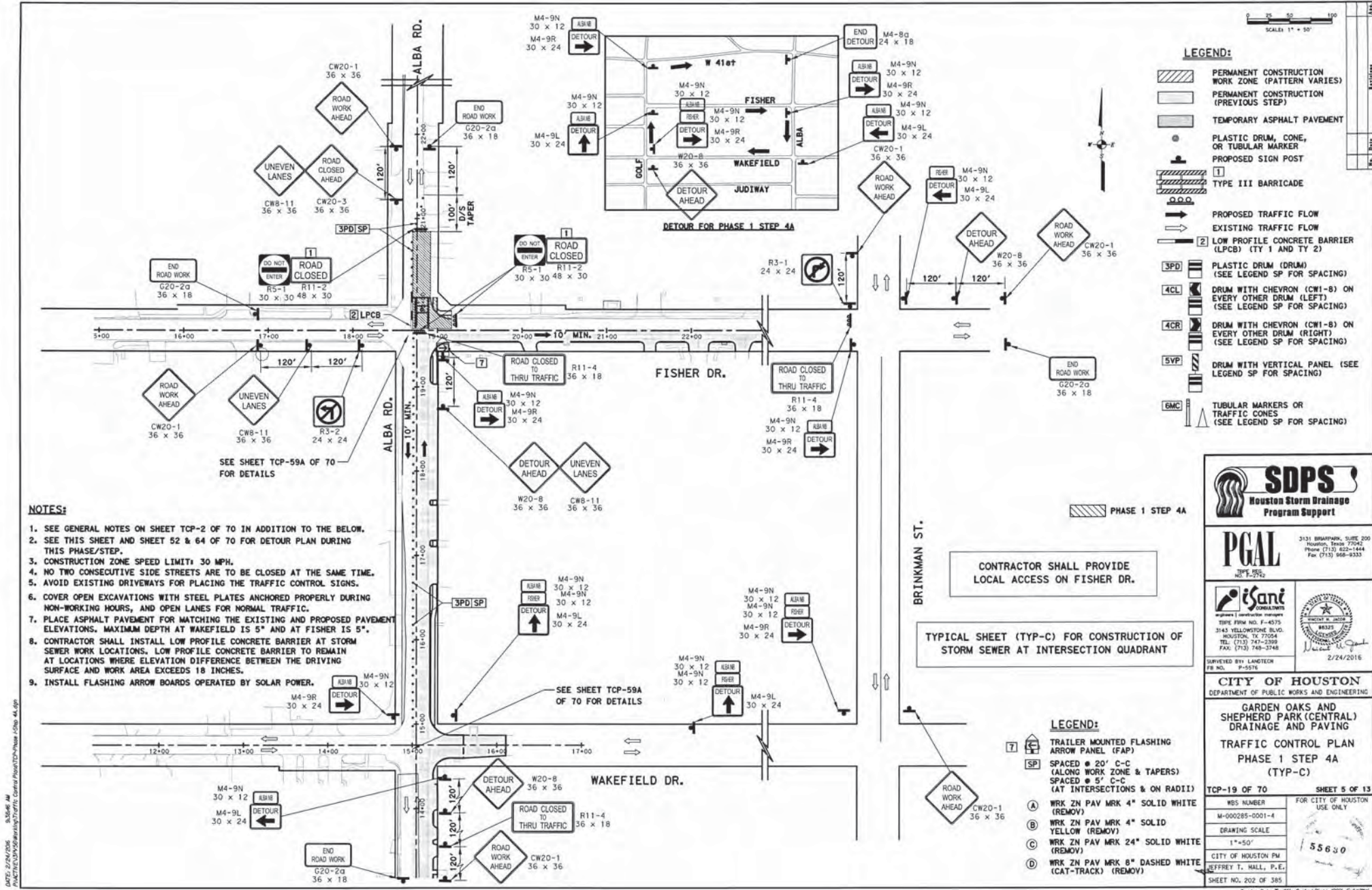
GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

TRAFFIC CONTROL PLAN

PHASE 1 STEP 3B

TCP-18 OF 70 SHEET 4 OF 13

WBS NUMBER: M-000285-0001-4
DRAWING SCALE: 1"=50'
CITY OF HOUSTON PW
JEFFREY T. HALL, P.E.
SHEET NO. 201 OF 385



LEGEND:

- PERMANENT CONSTRUCTION WORK ZONE (PATTERN VARIES)
- PERMANENT CONSTRUCTION (PREVIOUS STEP)
- TEMPORARY ASPHALT PAVEMENT
- PLASTIC DRUM, CONE, OR TUBULAR MARKER
- PROPOSED SIGN POST
- TYPE III BARRICADE
- PROPOSED TRAFFIC FLOW
- EXISTING TRAFFIC FLOW
- LOW PROFILE CONCRETE BARRIER (LPCB) (TY 1 AND TY 2)
- 3PD PLASTIC DRUM (DRUM) (SEE LEGEND SP FOR SPACING)
- 4CL DRUM WITH CHEVRON (CW1-8) ON EVERY OTHER DRUM (LEFT) (SEE LEGEND SP FOR SPACING)
- 4CR DRUM WITH CHEVRON (CW1-8) ON EVERY OTHER DRUM (RIGHT) (SEE LEGEND SP FOR SPACING)
- 5VP DRUM WITH VERTICAL PANEL (SEE LEGEND SP FOR SPACING)
- 6MC TUBULAR MARKERS OR TRAFFIC CONES (SEE LEGEND SP FOR SPACING)

- NOTES:**
1. SEE GENERAL NOTES ON SHEET TCP-2 OF 70 IN ADDITION TO THE BELOW.
 2. SEE THIS SHEET AND SHEET 52 & 64 OF 70 FOR DETOUR PLAN DURING THIS PHASE/STEP.
 3. CONSTRUCTION ZONE SPEED LIMIT: 30 MPH.
 4. NO TWO CONSECUTIVE SIDE STREETS ARE TO BE CLOSED AT THE SAME TIME.
 5. AVOID EXISTING DRIVEWAYS FOR PLACING THE TRAFFIC CONTROL SIGNS.
 6. COVER OPEN EXCAVATIONS WITH STEEL PLATES ANCHORED PROPERLY DURING NON-WORKING HOURS, AND OPEN LANES FOR NORMAL TRAFFIC.
 7. PLACE ASPHALT PAVEMENT FOR MATCHING THE EXISTING AND PROPOSED PAVEMENT ELEVATIONS. MAXIMUM DEPTH AT WAKEFIELD IS 5" AND AT FISHER IS 5".
 8. CONTRACTOR SHALL INSTALL LOW PROFILE CONCRETE BARRIER AT STORM SEWER WORK LOCATIONS, LOW PROFILE CONCRETE BARRIER TO REMAIN AT LOCATIONS WHERE ELEVATION DIFFERENCE BETWEEN THE DRIVING SURFACE AND WORK AREA EXCEEDS 18 INCHES.
 9. INSTALL FLASHING ARROW BOARDS OPERATED BY SOLAR POWER.

CONTRACTOR SHALL PROVIDE LOCAL ACCESS ON FISHER DR.

TYPICAL SHEET (TYP-C) FOR CONSTRUCTION OF STORM SEWER AT INTERSECTION QUADRANT

- LEGEND:**
- TRAILER MOUNTED FLASHING ARROW PANEL (FAP)
 - SPACED @ 20' C-C (ALONG WORK ZONE & TAPERS)
 - SPACED @ 5' C-C (AT INTERSECTIONS & ON RADII)
 - WRK ZN PAV MRK 4" SOLID WHITE (REMOV)
 - WRK ZN PAV MRK 4" SOLID YELLOW (REMOV)
 - WRK ZN PAV MRK 24" SOLID WHITE (REMOV)
 - WRK ZN PAV MRK 8" DASHED WHITE (CAT-TRACK) (REMOV)

SDPS
Houston Storm Drainage Program Support

PGAL
3131 BRINKMAN, SUITE 200
Houston, Texas 77042
Phone: (713) 624-1444
Fax: (713) 666-9333

iSani
CORPORATION
3145 YELLOWSTONE BLVD.
HOUSTON, TX 77054
TEL: (713) 747-2399
FAX: (713) 748-3748

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

TRAFFIC CONTROL PLAN
PHASE 1 STEP 4A
(TYP-C)

TCP-19 OF 70 SHEET 5 OF 13

FOR CITY OF HOUSTON USE ONLY

DRAWING SCALE: 1"=50'

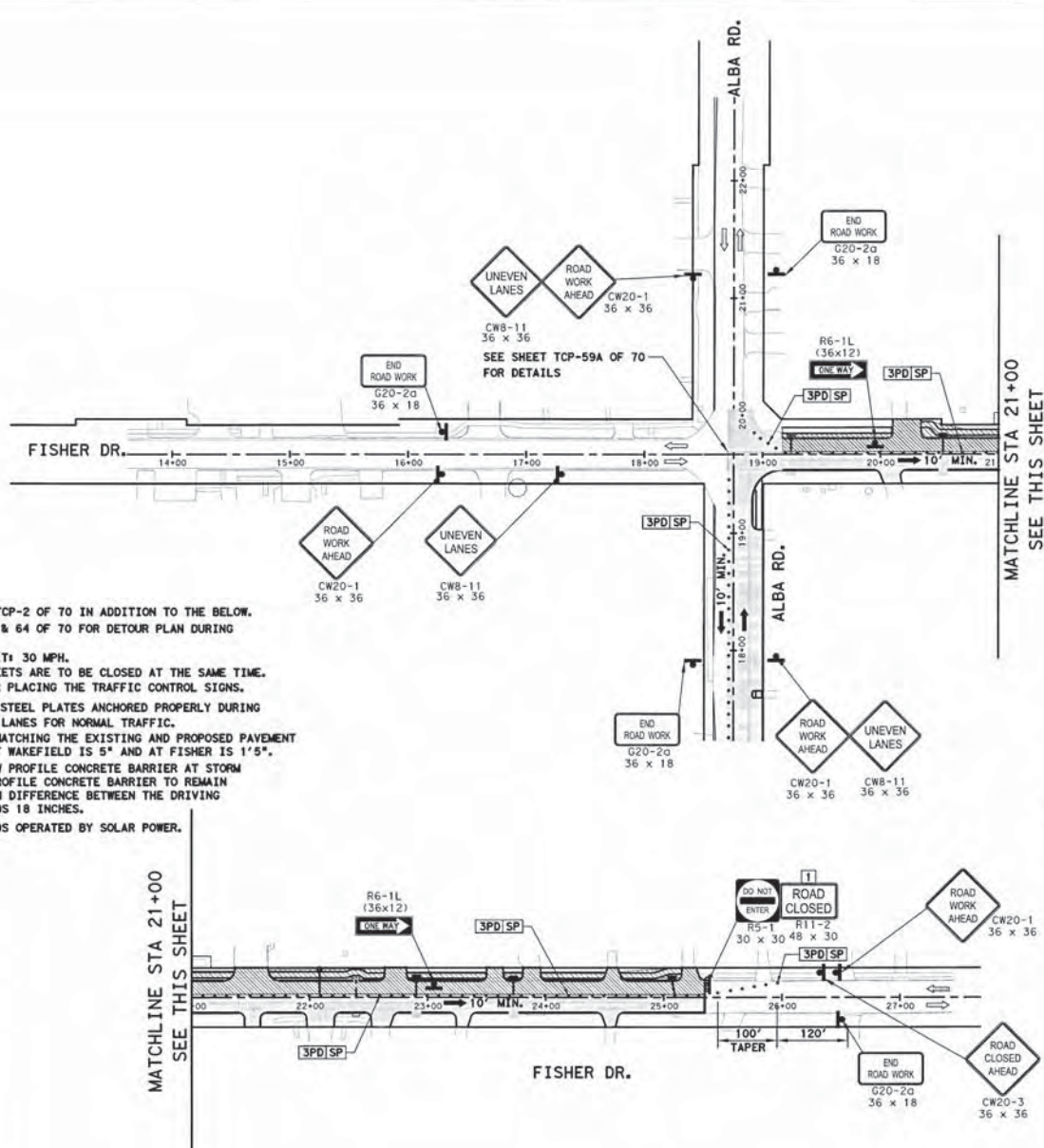
CITY OF HOUSTON PM: JEFFREY T. HALL, P.E.

SHEET NO. 202 OF 385

55630

DATE: 2/24/2016 8:36:46 AM
PROJECT: US-59/281/282/283/284/285/286/287/288/289/290/291/292/293/294/295/296/297/298/299/300/301/302/303/304/305/306/307/308/309/310/311/312/313/314/315/316/317/318/319/320/321/322/323/324/325/326/327/328/329/330/331/332/333/334/335/336/337/338/339/340/341/342/343/344/345/346/347/348/349/350/351/352/353/354/355/356/357/358/359/360/361/362/363/364/365/366/367/368/369/370/371/372/373/374/375/376/377/378/379/380/381/382/383/384/385/386/387/388/389/390/391/392/393/394/395/396/397/398/399/400/401/402/403/404/405/406/407/408/409/410/411/412/413/414/415/416/417/418/419/420/421/422/423/424/425/426/427/428/429/430/431/432/433/434/435/436/437/438/439/440/441/442/443/444/445/446/447/448/449/450/451/452/453/454/455/456/457/458/459/460/461/462/463/464/465/466/467/468/469/470/471/472/473/474/475/476/477/478/479/480/481/482/483/484/485/486/487/488/489/490/491/492/493/494/495/496/497/498/499/500/501/502/503/504/505/506/507/508/509/510/511/512/513/514/515/516/517/518/519/520/521/522/523/524/525/526/527/528/529/530/531/532/533/534/535/536/537/538/539/540/541/542/543/544/545/546/547/548/549/550/551/552/553/554/555/556/557/558/559/560/561/562/563/564/565/566/567/568/569/570/571/572/573/574/575/576/577/578/579/580/581/582/583/584/585/586/587/588/589/590/591/592/593/594/595/596/597/598/599/600/601/602/603/604/605/606/607/608/609/610/611/612/613/614/615/616/617/618/619/620/621/622/623/624/625/626/627/628/629/630/631/632/633/634/635/636/637/638/639/640/641/642/643/644/645/646/647/648/649/650/651/652/653/654/655/656/657/658/659/660/661/662/663/664/665/666/667/668/669/670/671/672/673/674/675/676/677/678/679/680/681/682/683/684/685/686/687/688/689/690/691/692/693/694/695/696/697/698/699/700/701/702/703/704/705/706/707/708/709/710/711/712/713/714/715/716/717/718/719/720/721/722/723/724/725/726/727/728/729/730/731/732/733/734/735/736/737/738/739/740/741/742/743/744/745/746/747/748/749/750/751/752/753/754/755/756/757/758/759/760/761/762/763/764/765/766/767/768/769/770/771/772/773/774/775/776/777/778/779/780/781/782/783/784/785/786/787/788/789/790/791/792/793/794/795/796/797/798/799/800/801/802/803/804/805/806/807/808/809/810/811/812/813/814/815/816/817/818/819/820/821/822/823/824/825/826/827/828/829/830/831/832/833/834/835/836/837/838/839/840/841/842/843/844/845/846/847/848/849/850/851/852/853/854/855/856/857/858/859/860/861/862/863/864/865/866/867/868/869/870/871/872/873/874/875/876/877/878/879/880/881/882/883/884/885/886/887/888/889/890/891/892/893/894/895/896/897/898/899/900/901/902/903/904/905/906/907/908/909/910/911/912/913/914/915/916/917/918/919/920/921/922/923/924/925/926/927/928/929/930/931/932/933/934/935/936/937/938/939/940/941/942/943/944/945/946/947/948/949/950/951/952/953/954/955/956/957/958/959/960/961/962/963/964/965/966/967/968/969/970/971/972/973/974/975/976/977/978/979/980/981/982/983/984/985/986/987/988/989/990/991/992/993/994/995/996/997/998/999/1000

DATE: 2/24/2016 8:36:50 AM
 DRAWING: C:\Users\jhall\OneDrive\Documents\Traffic Control Plans\TCP-Phase 1\Sheets\48.dwg



NOTES:

1. SEE GENERAL NOTES ON SHEET TCP-2 OF 70 IN ADDITION TO THE BELOW.
2. SEE THIS SHEET AND SHEET 52 & 64 OF 70 FOR DETOUR PLAN DURING THIS PHASE/STEP.
3. CONSTRUCTION ZONE SPEED LIMIT: 30 MPH.
4. NO TWO CONSECUTIVE SIDE STREETS ARE TO BE CLOSED AT THE SAME TIME.
5. AVOID EXISTING DRIVENWAYS FOR PLACING THE TRAFFIC CONTROL SIGNS.
6. COVER OPEN EXCAVATIONS WITH STEEL PLATES ANCHORED PROPERLY DURING NON-WORKING HOURS, AND OPEN LANES FOR NORMAL TRAFFIC.
7. PLACE ASPHALT PAVEMENT FOR MATCHING THE EXISTING AND PROPOSED PAVEMENT ELEVATIONS. MAXIMUM DEPTH AT WAKEFIELD IS 5" AND AT FISHER IS 1'5".
8. CONTRACTOR SHALL INSTALL LOW PROFILE CONCRETE BARRIER AT STORM SEWER WORK LOCATIONS. LOW PROFILE CONCRETE BARRIER TO REMAIN AT LOCATIONS WHERE ELEVATION DIFFERENCE BETWEEN THE DRIVING SURFACE AND WORK AREA EXCEEDS 18 INCHES.
9. INSTALL FLASHING ARROW BOARDS OPERATED BY SOLAR POWER.

LEGEND:

- PERMANENT CONSTRUCTION WORK ZONE (PATTERN VARIES)
- PERMANENT CONSTRUCTION (PREVIOUS STEP)
- TEMPORARY ASPHALT PAVEMENT
- PLASTIC DRUM, CONE, OR TUBULAR MARKER
- PROPOSED SIGN POST
- TYPE III BARRICADE
- PROPOSED TRAFFIC FLOW
- EXISTING TRAFFIC FLOW
- LOW PROFILE CONCRETE BARRIER (LPCB) (TY 1 AND TY 2)
- PLASTIC DRUM (DRUM) (SEE LEGEND SP FOR SPACING)
- DRUM WITH CHEVRON (CW1-8) ON EVERY OTHER DRUM (LEFT) (SEE LEGEND SP FOR SPACING)
- DRUM WITH CHEVRON (CW1-8) ON EVERY OTHER DRUM (RIGHT) (SEE LEGEND SP FOR SPACING)
- DRUM WITH VERTICAL PANEL (SEE LEGEND SP FOR SPACING)
- TUBULAR MARKERS OR TRAFFIC CONES (SEE LEGEND SP FOR SPACING)

PHASE 1 STEP 4

TYPICAL SHEET 59B OF 70 (TYP-7A) FOR CONSTRUCTION OF STORM SEWER AND OTHER HALF PAVEMENT

LEGEND:

- TRAILER MOUNTED FLASHING ARROW PANEL (FAP)
- SPACED # 20' C-C (ALONG WORK ZONE & TAPERS) SPACED # 5' C-C (AT INTERSECTIONS & ON RADII)
- WRK ZN PAV MKR 4" SOLID WHITE (REMOV)
- WRK ZN PAV MKR 4" SOLID YELLOW (REMOV)
- WRK ZN PAV MKR 24" SOLID WHITE (REMOV)
- WRK ZN PAV MKR 8" DASHED WHITE (CAT-TRACK) (REMOV)

SDPS
Houston Storm Drainage Program Support

PGAL
3131 BEDFORD, SUITE 203
Houston, Texas 77042
Phone: (713) 824-1444
Fax: (713) 666-9333

iSani
CONTRACTORS
3143 YELLOWSTONE BLVD.
HOUSTON, TX 77054
TEL: (713) 747-2399
FAX: (713) 748-3748
2/24/2016

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

TRAFFIC CONTROL PLAN
PHASE 1 STEP 4B

TCR-20 OF 70 SHEET 6 OF 13

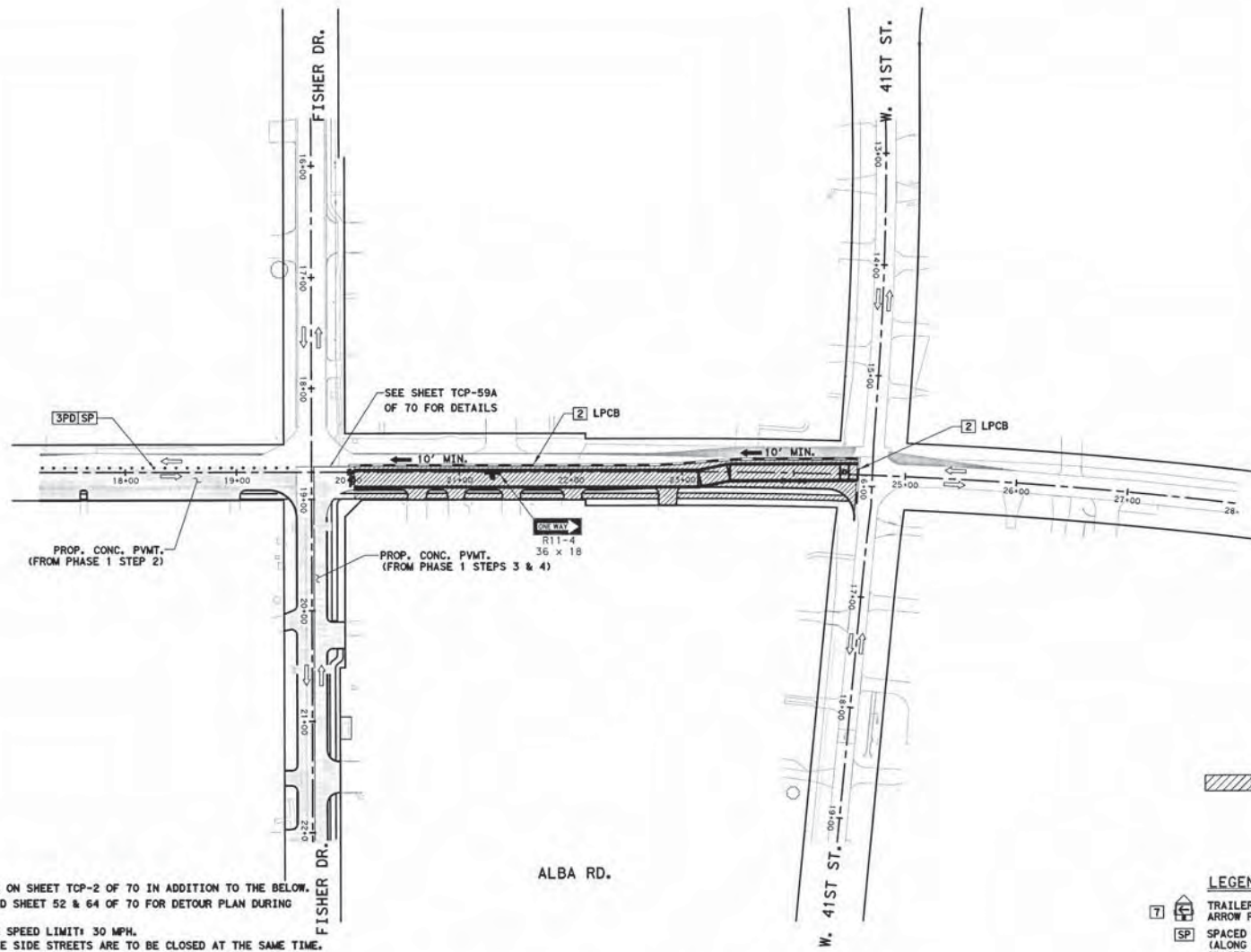
RES NUMBER M-000285-0001-4 DRAWING SCALE 1"=50' CITY OF HOUSTON PM JEFFREY T. HALL, P.E. SHEET NO. 203 OF 385	FOR CITY OF HOUSTON USE ONLY 55630
---	--

Garden Oaks_Traffic Control Plans_001_Sdps16



LEGEND:

- PERMANENT CONSTRUCTION WORK ZONE (PATTERN VARIES)
- PERMANENT CONSTRUCTION (PREVIOUS STEP)
- TEMPORARY ASPHALT PAVEMENT
- PLASTIC DRUM, CONE, OR TUBULAR MARKER
- PROPOSED SIGN POST
- 1 TYPE III BARRICADE
- PROPOSED TRAFFIC FLOW
- EXISTING TRAFFIC FLOW
- 2 LOW PROFILE CONCRETE BARRIER (LPCB) (TY 1 AND TY 2)
- 3PD PLASTIC DRUM (DRUM) (SEE LEGEND SP FOR SPACING)
- 4CL DRUM WITH CHEVRON (CW1-8) ON EVERY OTHER DRUM (LEFT) (SEE LEGEND SP FOR SPACING)
- 4CR DRUM WITH CHEVRON (CW1-8) ON EVERY OTHER DRUM (RIGHT) (SEE LEGEND SP FOR SPACING)
- 5VP DRUM WITH VERTICAL PANEL (SEE LEGEND SP FOR SPACING)
- 6MC TUBULAR MARKERS OR TRAFFIC CONES (SEE LEGEND SP FOR SPACING)



PHASE 1 STEP 5

LEGEND:

- 7 TRAILER MOUNTED FLASHING ARROW PANEL (FAP)
- SP SPACED # 20' C-C (ALONG WORK ZONE & TAPERS) SPACED # 5' C-C (AT INTERSECTIONS & ON RADIUS)
- A WRK ZN PAV MRK 4" SOLID WHITE (REMOV)
- B WRK ZN PAV MRK 4" SOLID YELLOW (REMOV)
- C WRK ZN PAV MRK 24" SOLID WHITE (REMOV)
- D WRK ZN PAV MRK 8" DASHED WHITE (CAT-TRACK) (REMOV)

SEE SHEET 55 OF 70
SEE TYPICAL SHEET (TYP-2) FOR PLACEMENT OF
TRAFFIC CONTROL SIGNS DURING PHASE 1 STEP 5

NOTES:

1. SEE GENERAL NOTES ON SHEET TCP-2 OF 70 IN ADDITION TO THE BELOW.
2. SEE THIS SHEET AND SHEET 52 & 64 OF 70 FOR DETOUR PLAN DURING THIS PHASE/STEP.
3. CONSTRUCTION ZONE SPEED LIMIT: 30 MPH.
4. NO TWO CONSECUTIVE SIDE STREETS ARE TO BE CLOSED AT THE SAME TIME.
5. AVOID EXISTING DRIVENWAYS FOR PLACING THE TRAFFIC CONTROL SIGNS.
6. COVER OPEN EXCAVATIONS WITH STEEL PLATES ANCHORED PROPERLY DURING NON-WORKING HOURS, AND OPEN LANES FOR NORMAL TRAFFIC.
7. PLACE ASPHALT PAVEMENT FOR MATCHING THE EXISTING AND PROPOSED PAVEMENT ELEVATIONS. MAXIMUM DEPTH AT FISHER IS 1'5" AND AT W. 41ST IS 1'6".
8. CONTRACTOR SHALL INSTALL LOW PROFILE CONCRETE BARRIER AT STORM SEWER WORK LOCATIONS. LOW PROFILE CONCRETE BARRIER TO REMAIN AT LOCATIONS WHERE ELEVATION DIFFERENCE BETWEEN THE DRIVING SURFACE AND WORK AREA EXCEEDS 18 INCHES.
9. INSTALL FLASHING ARROW BOARDS OPERATED BY SOLAR POWER.

SDPS
Houston Storm Drainage
Program Support

PGAL
3111 BENTLEY BLVD., SUITE 200
HOUSTON, TEXAS 77041
Phone: (713) 822-1444
Fax: (713) 668-6333

isanti
CONSULTANTS

3143 YELLOWSTONE BLVD.
HOUSTON, TX 77054
TEL: (713) 747-2369
FAX: (713) 748-3748

2/24/2016

SURVEYED BY: LANDTECH
FB NO. P-9576

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING
TRAFFIC CONTROL PLAN
PHASE 1 STEP 5

TCP-21 OF 70 SHEET 7 OF 13

MBS NUMBER	FOR CITY OF HOUSTON USE ONLY
M-000285-0001-4	
DRAWING SCALE	
1"=50'	
CITY OF HOUSTON PM	
JEFFREY T. HALL, P.E.	
SHEET NO. 204 OF 385	

DATE: 2/24/2016 9:50:52 AM
PROJECT: SDPS/Storm Drainage/Traffic Control Plan/Phase 1/Step 5.dwg

DATE: 8/24/2016 9:55:56 AM
 P:\PROJECTS\2016\Garden Oaks\Traffic Control Plans\TCP-Phase 6.dwg



SEE SHEET TCP-59A OF 70 FOR DETAILS

3PD|SP

SEE SHEET TCP-59A OF 70 FOR DETAILS

3PD|SP

ALBA RD.

W. 41ST ST.

W. 41ST ST.

TEMPORARY ASPHALT PAVEMENT (FROM PHASE 1 STEP 4A AREA = 347 SY) (SEE SHEET TCP-12 OF 70 FOR THICKNESS)

SEE SHEET 55 OF 70 TYPICAL SHEET (TYP-2) FOR TRAFFIC CONTROL SIGNAGE



LEGEND:

- PERMANENT CONSTRUCTION WORK ZONE (PATTERN VARIES)
- PERMANENT CONSTRUCTION (PREVIOUS STEP)
- TEMPORARY ASPHALT PAVEMENT
- PLASTIC DRUM, CONE, OR TUBULAR MARKER
- PROPOSED SIGN POST
- TYPE III BARRICADE
- PROPOSED TRAFFIC FLOW
- EXISTING TRAFFIC FLOW
- LOW PROFILE CONCRETE BARRIER (LPCB) (TY 1 AND TY 2)
- PLASTIC DRUM (DRUM) (SEE LEGEND SP FOR SPACING)
- DRUM WITH CHEVRON (CW1-8) ON EVERY OTHER DRUM (LEFT) (SEE LEGEND SP FOR SPACING)
- DRUM WITH CHEVRON (CW1-8) ON EVERY OTHER DRUM (RIGHT) (SEE LEGEND SP FOR SPACING)
- DRUM WITH VERTICAL PANEL (SEE LEGEND SP FOR SPACING)
- TUBULAR MARKERS OR TRAFFIC CONES (SEE LEGEND SP FOR SPACING)

NOTES:

1. SEE GENERAL NOTES ON SHEET TCP-2 OF 70 IN ADDITION TO THE BELOW.
2. SEE THIS SHEET AND SHEET 52 & 64 OF 70 FOR DETOUR PLAN DURING THIS PHASE/STEP.
3. CONSTRUCTION ZONE SPEED LIMIT: 30 MPH.
4. NO TWO CONSECUTIVE SIDE STREETS ARE TO BE CLOSED AT THE SAME TIME.
5. AVOID EXISTING DRIVEWAYS FOR PLACING THE TRAFFIC CONTROL SIGNS.
6. COVER OPEN EXCAVATIONS WITH STEEL PLATES ANCHORED PROPERLY DURING NON-WORKING HOURS, AND OPEN LANES FOR NORMAL TRAFFIC.
7. PLACE ASPHALT PAVEMENT FOR MATCHING THE EXISTING AND PROPOSED PAVEMENT ELEVATIONS. MAXIMUM DEPTH AT W. 41ST IS 1'6".
8. CONTRACTOR SHALL INSTALL LOW PROFILE CONCRETE BARRIER AT STORM SEWER WORK LOCATIONS, LOW PROFILE CONCRETE BARRIER TO REMAIN AT LOCATIONS WHERE ELEVATION DIFFERENCE BETWEEN THE DRIVING SURFACE AND WORK AREA EXCEEDS 18 INCHES.
9. INSTALL FLASHING ARROW BOARDS OPERATED BY SOLAR POWER.

PHASE 1 STEP 6

LEGEND:

- TRAILER MOUNTED FLASHING ARROW PANEL (FAP)
- SPACED # 20' C-C (ALONG WORK ZONE & TAPERS) SPACED # 5' C-C (AT INTERSECTIONS & ON RADII)
- WRK ZN PAV MRK 4" SOLID WHITE (REMOV)
- WRK ZN PAV MRK 4" SOLID YELLOW (REMOV)
- WRK ZN PAV MRK 24" SOLID WHITE (REMOV)
- WRK ZN PAV MRK 8" DASHED WHITE (CAT-TRACK) (REMOV)

SDPS
Houston Storm Drainage Program Support

PGAL
3131 BISHOPFARM, SUITE 200
HOUSTON, TEXAS 77042
PHONE (713) 622-1444
FAX (713) 668-9333

iSani
CORPORATION
TYPE FIRM NO. F-4575
3143 YELLOWSTONE BLVD.
HOUSTON, TX 77054
TEL. (713) 747-2369
FAX: (713) 748-3748

DESIGNED BY: LANDTECH
FIRM NO. P-5576

2/24/2016

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

TRAFFIC CONTROL PLAN

PHASE 1 STEP 6

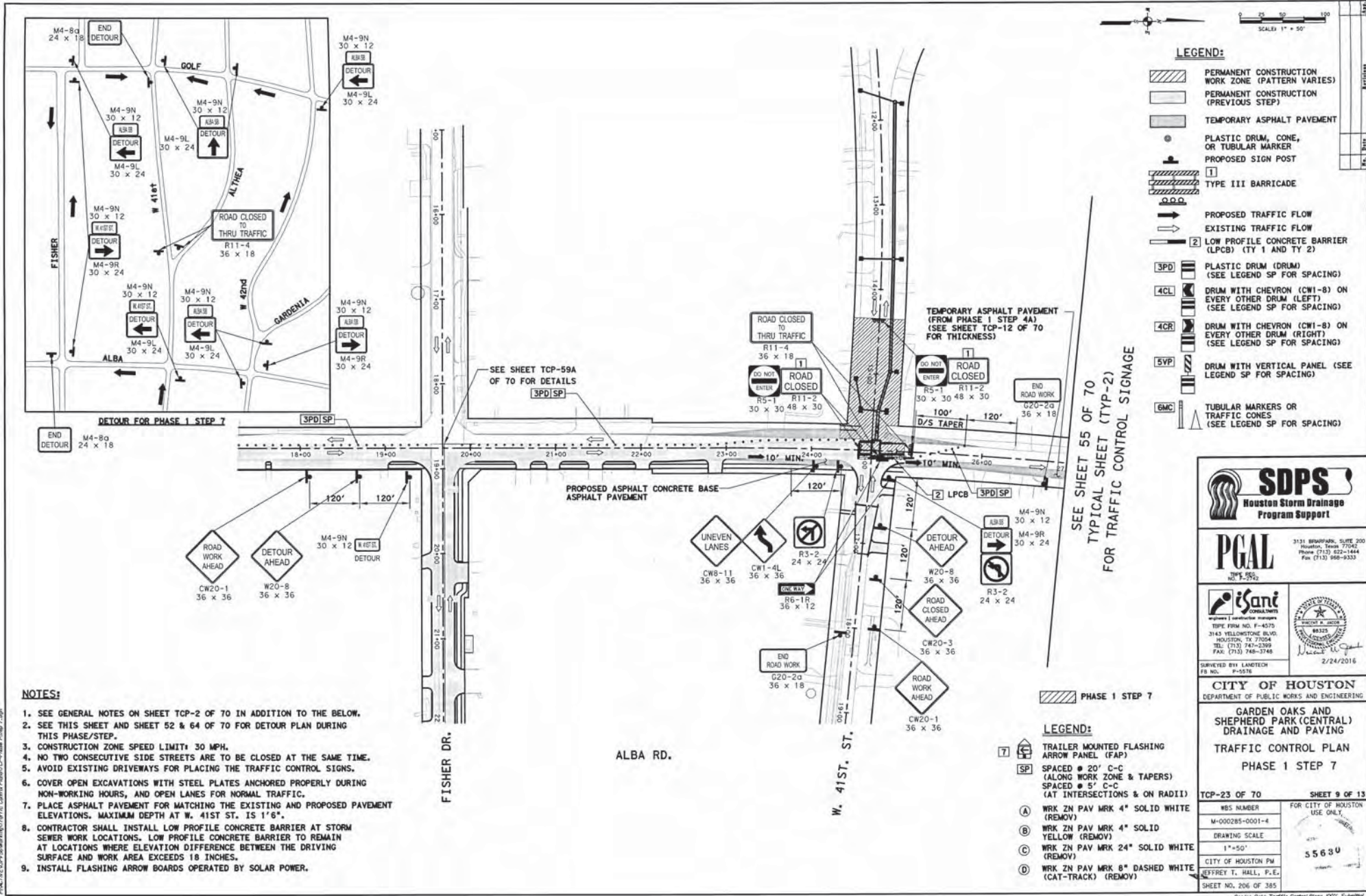
TCF-22 OF 70 SHEET 8 OF 13

FOR CITY OF HOUSTON USE ONLY

M-000285-0001-4
DRAWING SCALE
1"=50'
CITY OF HOUSTON PM
JEFFREY T. HALL, P.E.
SHEET NO. 205 OF 385

55630

Garden Oaks_Traffic Control Plans_J001_Salvador



LEGEND:

- PERMANENT CONSTRUCTION WORK ZONE (PATTERN VARIES)
- PERMANENT CONSTRUCTION (PREVIOUS STEP)
- TEMPORARY ASPHALT PAVEMENT
- PLASTIC DRUM, CONE, OR TUBULAR MARKER
- PROPOSED SIGN POST
- TYPE III BARRICADE
- PROPOSED TRAFFIC FLOW
- EXISTING TRAFFIC FLOW
- 2 LOW PROFILE CONCRETE BARRIER (LPCB) (TY 1 AND TY 2)
- 3PD PLASTIC DRUM (DRUM) (SEE LEGEND SP FOR SPACING)
- 4CL DRUM WITH CHEVRON (CW1-8) ON EVERY OTHER DRUM (LEFT) (SEE LEGEND SP FOR SPACING)
- 4CR DRUM WITH CHEVRON (CW1-8) ON EVERY OTHER DRUM (RIGHT) (SEE LEGEND SP FOR SPACING)
- 5VP DRUM WITH VERTICAL PANEL (SEE LEGEND SP FOR SPACING)
- 6MC TUBULAR MARKERS OR TRAFFIC CONES (SEE LEGEND SP FOR SPACING)

SEE SHEET 55 OF 70 TYPICAL SHEET (TYP-2) FOR TRAFFIC CONTROL SIGNAGE

SDPS
Houston Storm Drainage Program Support

PGAL
3131 BISHOPFORD, SUITE 200
Houston, Texas 77042
Phone: (713) 622-1414
Fax: (713) 958-9333

iSanti
CONCRETE REPAIRS
TYPE FIRM NO. F-4570
3143 YELLOWSTONE BLVD.
HOUSTON, TX 77054
TEL: (713) 747-2399
FAX: (713) 748-3748

2/24/2016

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

TRAFFIC CONTROL PLAN
PHASE 1 STEP 7

TCP-23 OF 70 SHEET 9 OF 13

FOR CITY OF HOUSTON USE ONLY.

55630

CITY OF HOUSTON PM
JEFFREY T. HALL, P.E.
SHEET NO. 206 OF 385

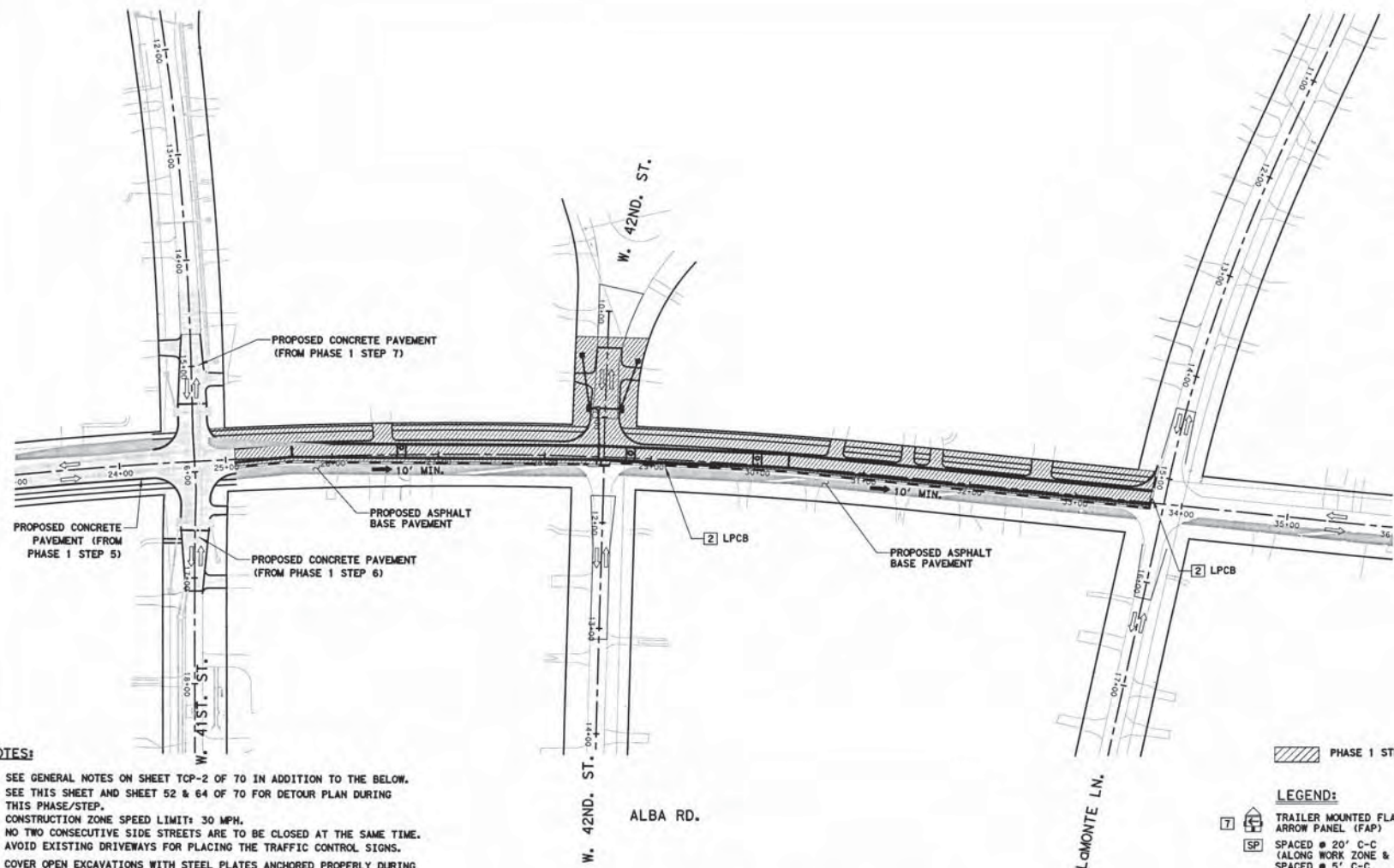
- NOTES:**
- SEE GENERAL NOTES ON SHEET TCP-2 OF 70 IN ADDITION TO THE BELOW.
 - SEE THIS SHEET AND SHEET 52 & 64 OF 70 FOR DETOUR PLAN DURING THIS PHASE/STEP.
 - CONSTRUCTION ZONE SPEED LIMIT: 30 MPH.
 - NO TWO CONSECUTIVE SIDE STREETS ARE TO BE CLOSED AT THE SAME TIME.
 - AVOID EXISTING DRIVEWAYS FOR PLACING THE TRAFFIC CONTROL SIGNS.
 - COVER OPEN EXCAVATIONS WITH STEEL PLATES ANCHORED PROPERLY DURING NON-WORKING HOURS, AND OPEN LANES FOR NORMAL TRAFFIC.
 - PLACE ASPHALT PAVEMENT FOR MATCHING THE EXISTING AND PROPOSED PAVEMENT ELEVATIONS. MAXIMUM DEPTH AT W. 41ST ST. IS 1'8".
 - CONTRACTOR SHALL INSTALL LOW PROFILE CONCRETE BARRIER AT STORM SEWER WORK LOCATIONS. LOW PROFILE CONCRETE BARRIER TO REMAIN AT LOCATIONS WHERE ELEVATION DIFFERENCE BETWEEN THE DRIVING SURFACE AND WORK AREA EXCEEDS 18 INCHES.
 - INSTALL FLASHING ARROW BOARDS OPERATED BY SOLAR POWER.

DATE: 2/24/2016 8:30:59 AM
C:\P20\156195\156195.dwg (T:\Traffic Control Plans\TCP-Phase 1 Step 7.dwg)



LEGEND:

- PERMANENT CONSTRUCTION WORK ZONE (PATTERN VARIES)
- PERMANENT CONSTRUCTION (PREVIOUS STEP)
- TEMPORARY ASPHALT PAVEMENT
- PLASTIC DRUM, CONE, OR TUBULAR MARKER PROPOSED SIGN POST
- 1 TYPE III BARRICADE
- PROPOSED TRAFFIC FLOW
- EXISTING TRAFFIC FLOW
- 2 LOW PROFILE CONCRETE BARRIER (LPCB) (TY 1 AND TY 2)
- 3PD PLASTIC DRUM (DRUM) (SEE LEGEND SP FOR SPACING)
- 4CL DRUM WITH CHEVRON (CW1-8) ON EVERY OTHER DRUM (LEFT) (SEE LEGEND SP FOR SPACING)
- 4CR DRUM WITH CHEVRON (CW1-8) ON EVERY OTHER DRUM (RIGHT) (SEE LEGEND SP FOR SPACING)
- 5VP DRUM WITH VERTICAL PANEL (SEE LEGEND SP FOR SPACING)
- 6MC TUBULAR MARKERS OR TRAFFIC CONES (SEE LEGEND SP FOR SPACING)



- NOTES:**
1. SEE GENERAL NOTES ON SHEET TCP-2 OF 70 IN ADDITION TO THE BELOW.
 2. SEE THIS SHEET AND SHEET 52 & 64 OF 70 FOR DETOUR PLAN DURING THIS PHASE/STEP.
 3. CONSTRUCTION ZONE SPEED LIMIT: 30 MPH.
 4. NO TWO CONSECUTIVE SIDE STREETS ARE TO BE CLOSED AT THE SAME TIME.
 5. AVOID EXISTING DRIVEWAYS FOR PLACING THE TRAFFIC CONTROL SIGNS.
 6. COVER OPEN EXCAVATIONS WITH STEEL PLATES ANCHORED PROPERLY DURING NON-WORKING HOURS, AND OPEN LANES FOR NORMAL TRAFFIC.
 7. PLACE ASPHALT PAVEMENT FOR MATCHING THE EXISTING AND PROPOSED PAVEMENT ELEVATIONS. MAXIMUM DEPTH AT W. 42ND IS 1'6".
 8. CONTRACTOR SHALL INSTALL LOW PROFILE CONCRETE BARRIER AT STORM SEWER WORK LOCATIONS. LOW PROFILE CONCRETE BARRIER TO REMAIN AT LOCATIONS WHERE ELEVATION DIFFERENCE BETWEEN THE DRIVING SURFACE AND WORK AREA EXCEEDS 18 INCHES.
 9. INSTALL FLASHING ARROW BOARDS OPERATED BY SOLAR POWER.

SEE SHEET 55 OF 70
SEE TYPICAL SHEET (TYP-2) FOR PLACEMENT OF
TRAFFIC CONTROL SIGNS DURING THIS PHASE 1 STEP 8

PHASE 1 STEP 8

LEGEND:

- TRAILER MOUNTED FLASHING ARROW PANEL (FAP)
- SP SPACED @ 20' C-C (ALONG WORK ZONE & TAPERS)
- A WRK ZN PAV MRK 4" SOLID WHITE (REMOV)
- B WRK ZN PAV MRK 4" SOLID YELLOW (REMOV)
- C WRK ZN PAV MRK 24" SOLID WHITE (REMOV)
- D WRK ZN PAV MRK 8" DASHED WHITE (CAT-TRACK) (REMOV)

3151 BRADPARK, SUITE 200
HOUSTON, TEXAS 77024
Phone (713) 822-1444
Fax (713) 968-8333

PGAL

MEMBER SINCE 1992

isani
CONSULTANTS

MEMBER | International members
TYPE FIRM NO. F-48375
3143 YELLOWSTONE BLVD.
HOUSTON, TX 77024
TEL: (713) 747-2399
FAX: (713) 748-3748

2/24/2016

CITY OF HOUSTON

DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

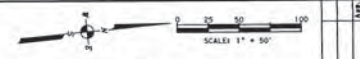
TRAFFIC CONTROL PLAN

PHASE 1 STEP 8

TCP-24 OF 70	SHEET 10 OF 13
WBS NUMBER	FOR CITY OF HOUSTON USE ONLY
M-000285-0001-4	
DRAWING SCALE	
1"=50'	55630
CITY OF HOUSTON PW	
JEFFREY T. HALL, P.E.	
SHEET NO. 207 OF 385	

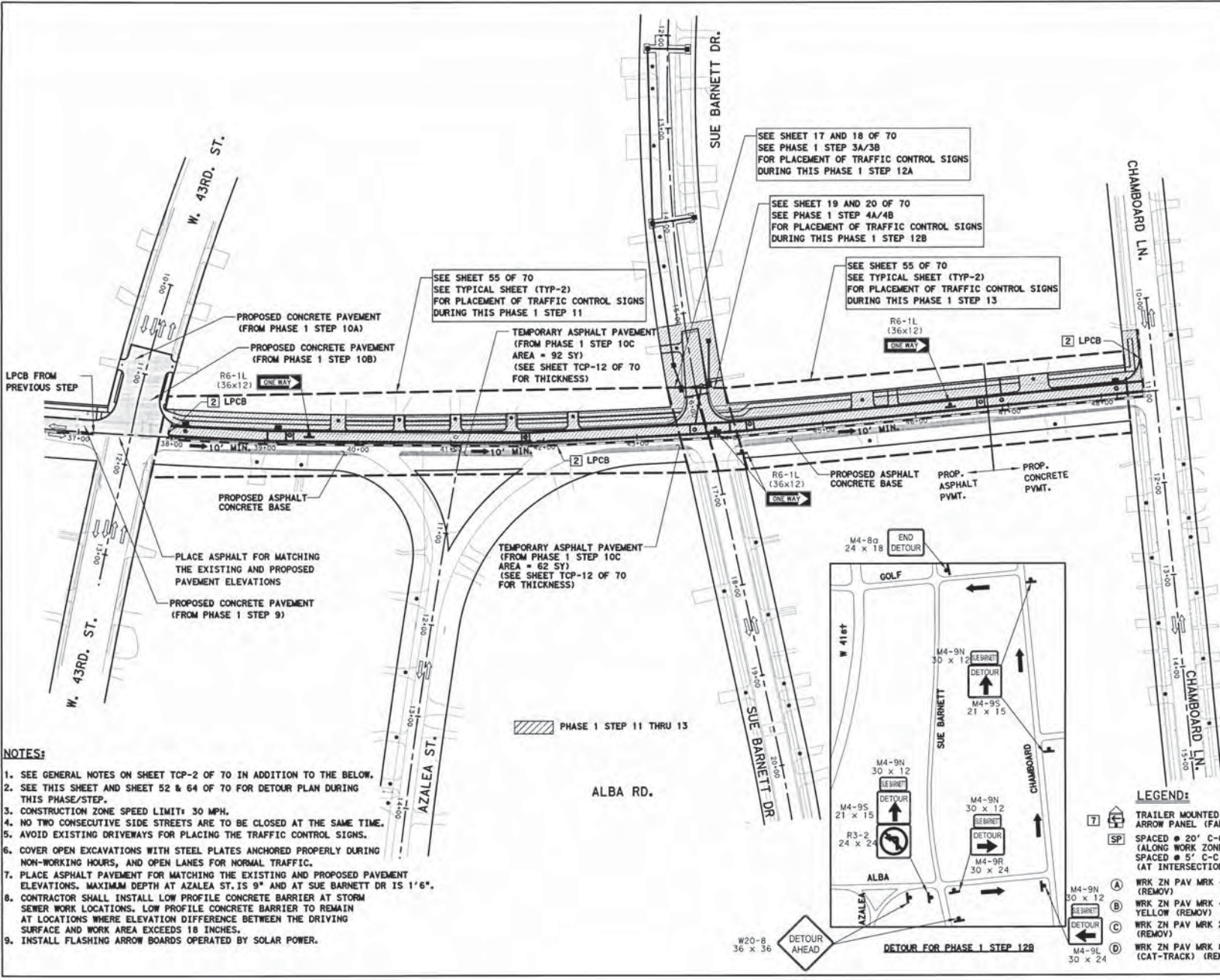
Garden Oaks_Traffic Control Plans_0001_Submittal

DATE: 02/24/2016 8:30:02 AM
PROJECT: SDPS Houston Storm Drainage Program Support
DRAWING: Garden Oaks_Traffic Control Plans_0001_Submittal

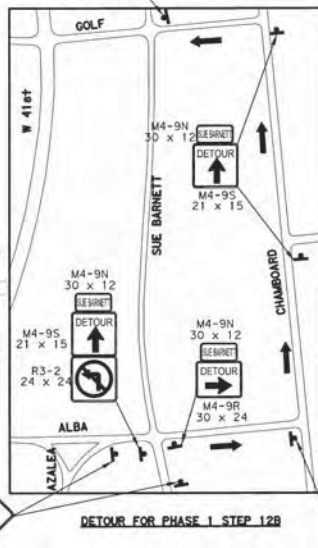


LEGEND:

- PERMANENT CONSTRUCTION WORK ZONE (PATTERN VARIES)
- PERMANENT CONSTRUCTION (PREVIOUS STEP)
- TEMPORARY ASPHALT PAVEMENT
- PLASTIC DRUM, CONE, OR TUBULAR MARKER
- PROPOSED SIGN POST
- 1 TYPE III BARRICADE
- PROPOSED TRAFFIC FLOW
- EXISTING TRAFFIC FLOW
- 2 LOW PROFILE CONCRETE BARRIER (LPCB) (TY 1 AND TY 2)
- 3PD PLASTIC DRUM (DRUM) (SEE LEGEND SP FOR SPACING)
- 4CL DRUM WITH CHEVRON (CW1-8) ON EVERY OTHER DRUM (LEFT) (SEE LEGEND SP FOR SPACING)
- 4CR DRUM WITH CHEVRON (CW1-8) ON EVERY OTHER DRUM (RIGHT) (SEE LEGEND SP FOR SPACING)
- 5VP DRUM WITH VERTICAL PANEL (SEE LEGEND SP FOR SPACING)
- 6MC TUBULAR MARKERS OR TRAFFIC CONES (SEE LEGEND SP FOR SPACING)



- NOTES:**
1. SEE GENERAL NOTES ON SHEET TCP-2 OF 70 IN ADDITION TO THE BELOW.
 2. SEE THIS SHEET AND SHEET 52 & 64 OF 70 FOR DETOUR PLAN DURING THIS PHASE/STEP.
 3. CONSTRUCTION ZONE SPEED LIMIT: 30 MPH.
 4. NO TWO CONSECUTIVE SIDE STREETS ARE TO BE CLOSED AT THE SAME TIME.
 5. AVOID EXISTING DRIVEWAYS FOR PLACING THE TRAFFIC CONTROL SIGNS.
 6. COVER OPEN EXCAVATIONS WITH STEEL PLATES ANCHORED PROPERLY DURING NON-WORKING HOURS, AND OPEN LANES FOR NORMAL TRAFFIC.
 7. PLACE ASPHALT PAVEMENT FOR MATCHING THE EXISTING AND PROPOSED PAVEMENT ELEVATIONS. MAXIMUM DEPTH AT AZALEA ST. IS 9" AND AT SUE BARNETT DR IS 1'6".
 8. CONTRACTOR SHALL INSTALL LOW PROFILE CONCRETE BARRIER AT STORM SEWER WORK LOCATIONS. LOW PROFILE CONCRETE BARRIER TO REMAIN AT LOCATIONS WHERE ELEVATION DIFFERENCE BETWEEN THE DRIVING SURFACE AND WORK AREA EXCEEDS 18 INCHES.
 9. INSTALL FLASHING ARROW BOARDS OPERATED BY SOLAR POWER.



- LEGEND:**
- 7 TRAILER MOUNTED FLASHING ARROW PANEL (FAP)
 - SP SPACED @ 20' C-C (ALONG WORK ZONE & TAPERS)
 - SPACED @ 5' C-C (AT INTERSECTIONS & ON RADII)
 - A WRK ZN PAV MRK 4" SOLID WHITE (REMOV)
 - B WRK ZN PAV MRK 4" SOLID YELLOW (REMOV)
 - C WRK ZN PAV MRK 24" SOLID WHITE (REMOV)
 - D WRK ZN PAV MRK 8" DASHED WHITE (CAT-TRACK) (REMOV)

SDPS
Houston Storm Drainage Program Support

PGAL
3131 SHEPHERD PARK, SUITE 200
HOUSTON, TEXAS 77042
Phone: (713) 622-1444
Fax: (713) 968-8333

iSanti CONSULTANTS
TYPE FIRM NO. F-4575
3143 YELLOWSTONE BLVD.
HOUSTON, TX 77054
TEL: (713) 747-2399
FAX: (713) 748-3748

APPROVED BY: LANDTECH
FR. NO. P-5576

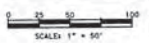
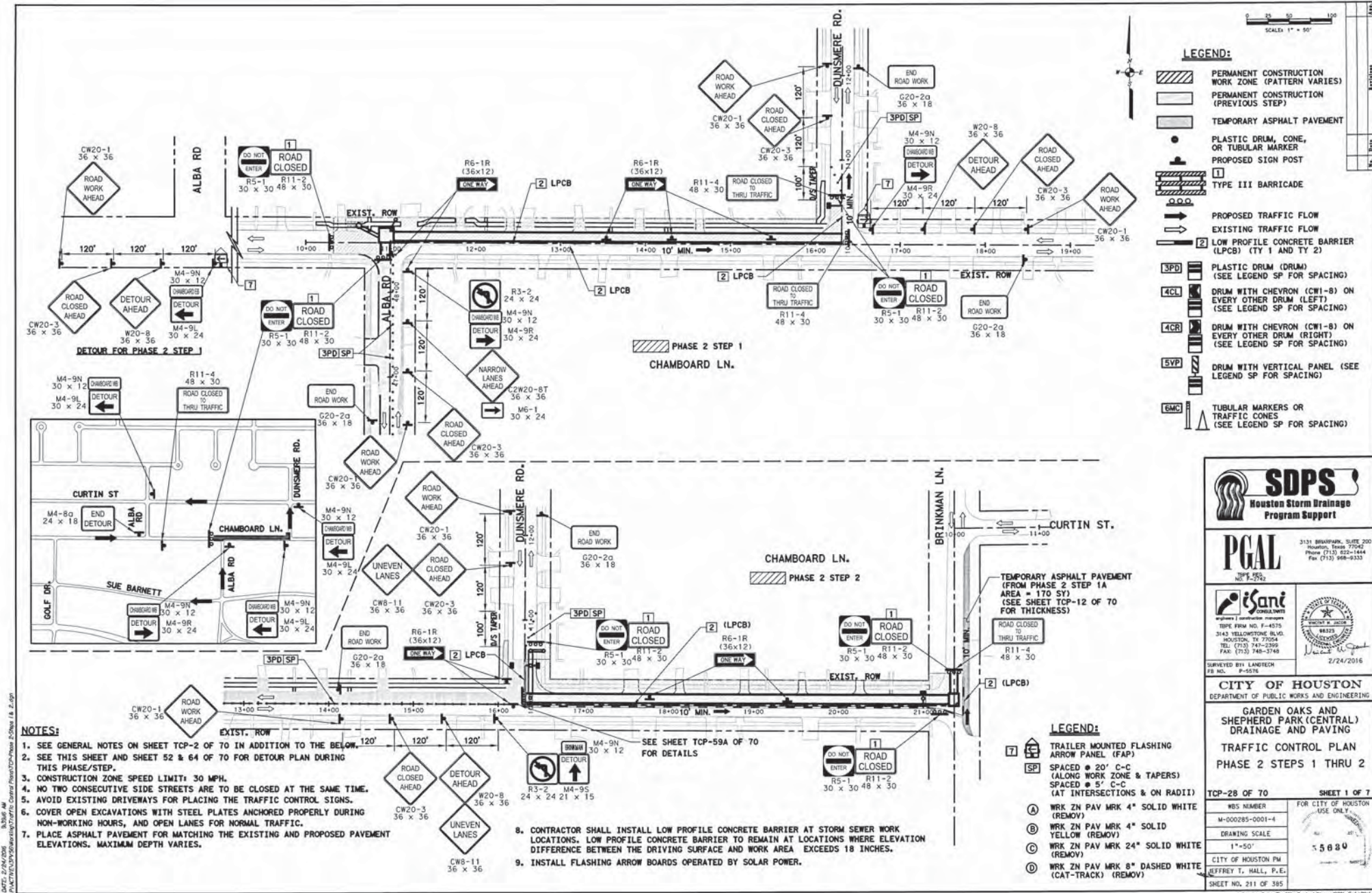
CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING
TRAFFIC CONTROL PLAN
PHASE 1 STEP 11 THRU 13

TCP-27 OF 70 SHEET 13 OF 13

RES NUMBER	FOR CITY OF HOUSTON USE ONLY
M-000285-0001-4	
DRAWING SCALE	
1" = 50'	
CITY OF HOUSTON PM	
JEFFREY T. HALL, P.E.	
SHEET NO. 210 OF 385	

DATE: 8/14/2008 8:30:13 AM P:\ACTIVEX\13\1308\1308\1308\Traffic Control Plans\TCP-Phase 1\Drawn: JFW\DWG: D1.dwg



- LEGEND:**
- PERMANENT CONSTRUCTION WORK ZONE (PATTERN VARIES)
 - PERMANENT CONSTRUCTION (PREVIOUS STEP)
 - TEMPORARY ASPHALT PAVEMENT
 - PLASTIC DRUM, CONE, OR TUBULAR MARKER
 - PROPOSED SIGN POST
 - TYPE III BARRICADE
 - PROPOSED TRAFFIC FLOW
 - EXISTING TRAFFIC FLOW
 - LOW PROFILE CONCRETE BARRIER (LPCB) (TY 1 AND TY 2)
 - 3PD PLASTIC DRUM (DRUM) (SEE LEGEND SP FOR SPACING)
 - 4CL DRUM WITH CHEVRON (CW1-8) ON EVERY OTHER DRUM (LEFT) (SEE LEGEND SP FOR SPACING)
 - 4CR DRUM WITH CHEVRON (CW1-8) ON EVERY OTHER DRUM (RIGHT) (SEE LEGEND SP FOR SPACING)
 - 5VP DRUM WITH VERTICAL PANEL (SEE LEGEND SP FOR SPACING)
 - TUBULAR MARKERS OR TRAFFIC CONES (SEE LEGEND SP FOR SPACING)

- NOTES:**
1. SEE GENERAL NOTES ON SHEET TCP-2 OF 70 IN ADDITION TO THE BELOW.
 2. SEE THIS SHEET AND SHEET 52 & 64 OF 70 FOR DETOUR PLAN DURING THIS PHASE/STEP.
 3. CONSTRUCTION ZONE SPEED LIMIT: 30 MPH.
 4. NO TWO CONSECUTIVE SIDE STREETS ARE TO BE CLOSED AT THE SAME TIME.
 5. AVOID EXISTING DRIVEWAYS FOR PLACING THE TRAFFIC CONTROL SIGNS.
 6. COVER OPEN EXCAVATIONS WITH STEEL PLATES ANCHORED PROPERLY DURING NON-WORKING HOURS, AND OPEN LANES FOR NORMAL TRAFFIC.
 7. PLACE ASPHALT PAVEMENT FOR MATCHING THE EXISTING AND PROPOSED PAVEMENT ELEVATIONS. MAXIMUM DEPTH VARIES.

8. CONTRACTOR SHALL INSTALL LOW PROFILE CONCRETE BARRIER AT STORM SEWER WORK LOCATIONS. LOW PROFILE CONCRETE BARRIER TO REMAIN AT LOCATIONS WHERE ELEVATION DIFFERENCE BETWEEN THE DRIVING SURFACE AND WORK AREA EXCEEDS 18 INCHES.
9. INSTALL FLASHING ARROW BOARDS OPERATED BY SOLAR POWER.

- LEGEND:**
- 7 TRAILER MOUNTED FLASHING ARROW PANEL (FAP)
 - SP SPACED # 20" C-C (ALONG WORK ZONE & TAPERS) SPACED # 5" C-C (AT INTERSECTIONS & ON RADIUS)
 - A WRK ZN PAV MRK 4" SOLID WHITE (REMOV)
 - B WRK ZN PAV MRK 4" SOLID YELLOW (REMOV)
 - C WRK ZN PAV MRK 24" SOLID WHITE (REMOV)
 - D WRK ZN PAV MRK 8" DASHED WHITE (CAT-TRACK) (REMOV)

SDPS
Houston Storm Drainage Program Support

PGAL
3131 BRINKMAN, SUITE 200
HOUSTON, TEXAS 77004
Phone (713) 822-1444
Fax (713) 968-9333

iSant
CONSULTANTS
3143 YELLOWSTONE BLVD.
HOUSTON, TX 77054
TEL: (713) 749-2559
FAX: (713) 749-3748

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

TRAFFIC CONTROL PLAN
PHASE 2 STEPS 1 THRU 2

TCP-28 OF 70 SHEET 1 OF 7

FOR CITY OF HOUSTON USE ONLY

DRAWING SCALE: 1"=50'

CITY OF HOUSTON PM: JEFFREY T. HALL, P.E.

SHEET NO. 211 OF 385

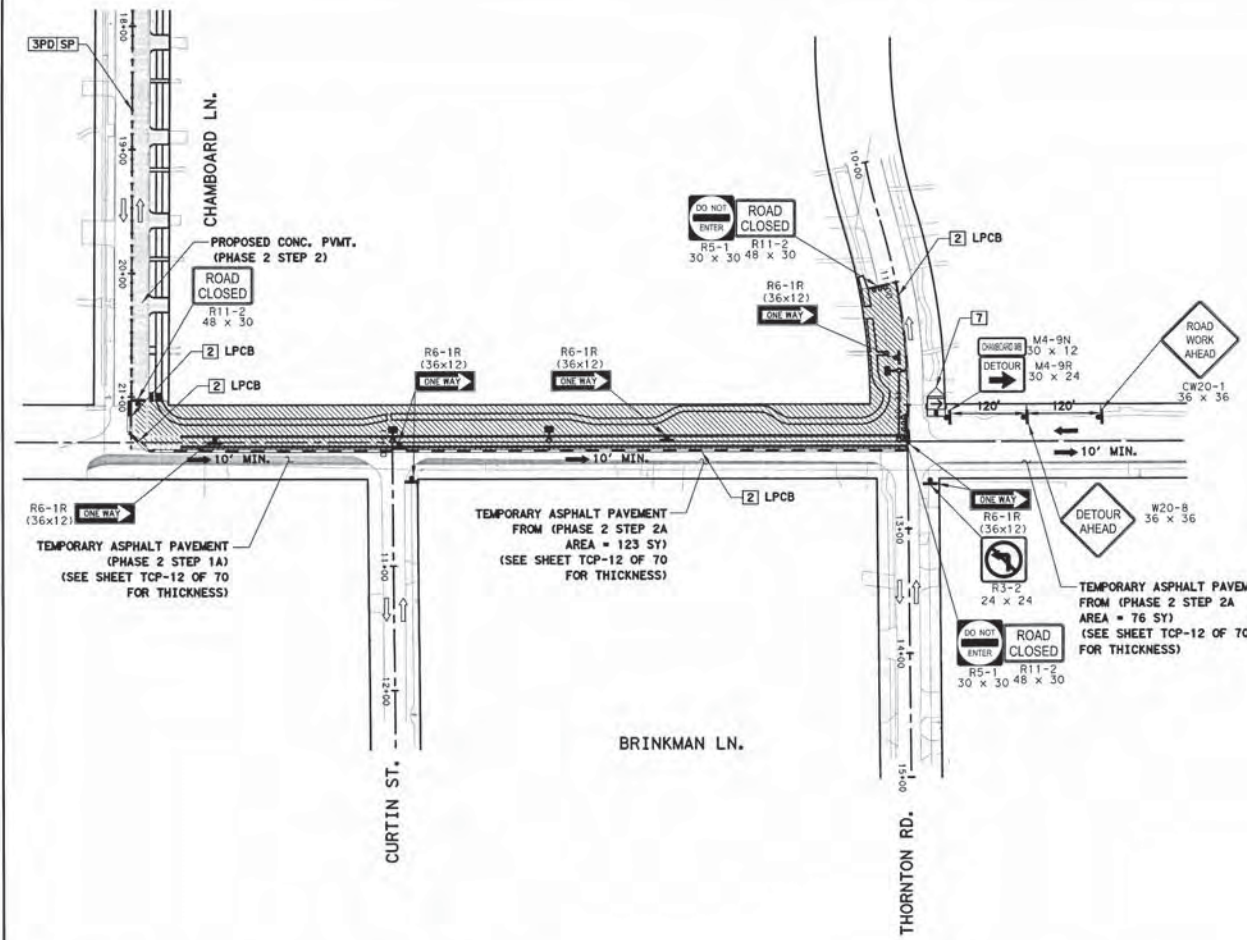
DATE: 2/24/2016
DRAWN BY: J. HALL
CHECKED BY: J. HALL
PROJECT: GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING - PHASE 2 STEPS 1 & 2



LEGEND:

- PERMANENT CONSTRUCTION WORK ZONE (PATTERN VARIES)
- PERMANENT CONSTRUCTION (PREVIOUS STEP)
- TEMPORARY ASPHALT PAVEMENT
- PLASTIC DRUM, CONE, OR TUBULAR MARKER
- PROPOSED SIGN POST
- TYPE III BARRICADE
- PROPOSED TRAFFIC FLOW
- EXISTING TRAFFIC FLOW
- LOW PROFILE CONCRETE BARRIER (LPCB) (TY 1 AND TY 2)
- 3PD PLASTIC DRUM (DRUM) (SEE LEGEND SP FOR SPACING)
- 4CL DRUM WITH CHEVRON (CW1-8) ON EVERY OTHER DRUM (LEFT) (SEE LEGEND SP FOR SPACING)
- 4CR DRUM WITH CHEVRON (CW1-8) ON EVERY OTHER DRUM (RIGHT) (SEE LEGEND SP FOR SPACING)
- 5VP DRUM WITH VERTICAL PANEL (SEE LEGEND SP FOR SPACING)
- 6MC TUBULAR MARKERS OR TRAFFIC CONES (SEE LEGEND SP FOR SPACING)

DETOUR FOR PHASE 2 STEP 3A



CONTRACTOR SHALL PROVIDE LOCAL TRAFFIC ACCESS TO THE CHURCH

SEE SHEET 55 OF 70
SEE TYPICAL SHEET (TYP-2) FOR PLACEMENT OF TRAFFIC CONTROL SIGNS DURING THIS PHASE 2 STEP 3A

PHASE 2 STEP 3

LEGEND:

- TRAILER MOUNTED FLASHING ARROW PANEL (FAP)
- SP SPACED @ 20' C-C (ALONG WORK ZONE & TAPERS) SPACED @ 5' C-C (AT INTERSECTIONS & ON RADII)
- A WRK ZN PAV MRK 4" SOLID WHITE (REMOV)
- B WRK ZN PAV MRK 4" SOLID YELLOW (REMOV)
- C WRK ZN PAV MRK 24" SOLID WHITE (REMOV)
- D WRK ZN PAV MRK 8" DASHED WHITE (CAT-TRACK) (REMOV)

- NOTES:**
- SEE GENERAL NOTES ON SHEET TCP-2 OF 70 IN ADDITION TO THE BELOW.
 - SEE THIS SHEET AND SHEET 52 & 64 OF 70 FOR DETOUR PLAN DURING THIS PHASE/STEP.
 - CONSTRUCTION ZONE SPEED LIMIT: 30 MPH.
 - NO TWO CONSECUTIVE SIDE STREETS ARE TO BE CLOSED AT THE SAME TIME.
 - AVOID EXISTING DRIVEWAYS FOR PLACING THE TRAFFIC CONTROL SIGNS.
 - COVER OPEN EXCAVATIONS WITH STEEL PLATES ANCHORED PROPERLY DURING NON-WORKING HOURS, AND OPEN LANES FOR NORMAL TRAFFIC.
 - PLACE ASPHALT PAVEMENT FOR MATCHING THE EXISTING AND PROPOSED PAVEMENT ELEVATIONS. MAXIMUM DEPTH AT CURTIN ST. IS 1' AND AT THORNTON RD. IS 1' 1/2".
 - CONTRACTOR SHALL INSTALL LOW PROFILE CONCRETE BARRIER AT STORM SEWER WORK LOCATIONS. LOW PROFILE CONCRETE BARRIER TO REMAIN AT LOCATIONS WHERE ELEVATION DIFFERENCE BETWEEN THE DRIVING SURFACE AND WORK AREA EXCEEDS 18 INCHES.
 - INSTALL FLASHING ARROW BOARDS OPERATED BY SOLAR POWER.

SDPS
Houston Storm Drainage Program Support

PGAL
TYPE 955
M2 F-592

3131 BIRCHPARK, SUITE 200
HOUSTON, TEXAS 77042
PHONE: (713) 622-1444
FAX: (713) 666-9333

iSant
CONSULTANTS
MEMBER OF CONSULTING ENGINEERS

TYPE FIRM NO. F-4575
3143 YELLOWSTONE BLVD.
HOUSTON, TX 77024
TEL: (713) 747-2388
FAX: (713) 748-3748

DESIGNED BY: LANETECH
FR. NO. P-5576

2/24/2016

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING
TRAFFIC CONTROL PLAN
PHASE 2 STEP 3A

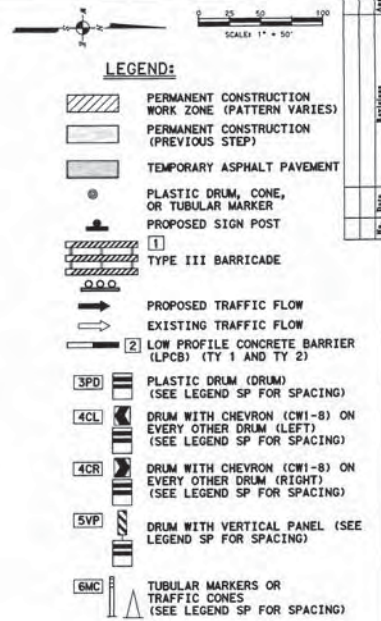
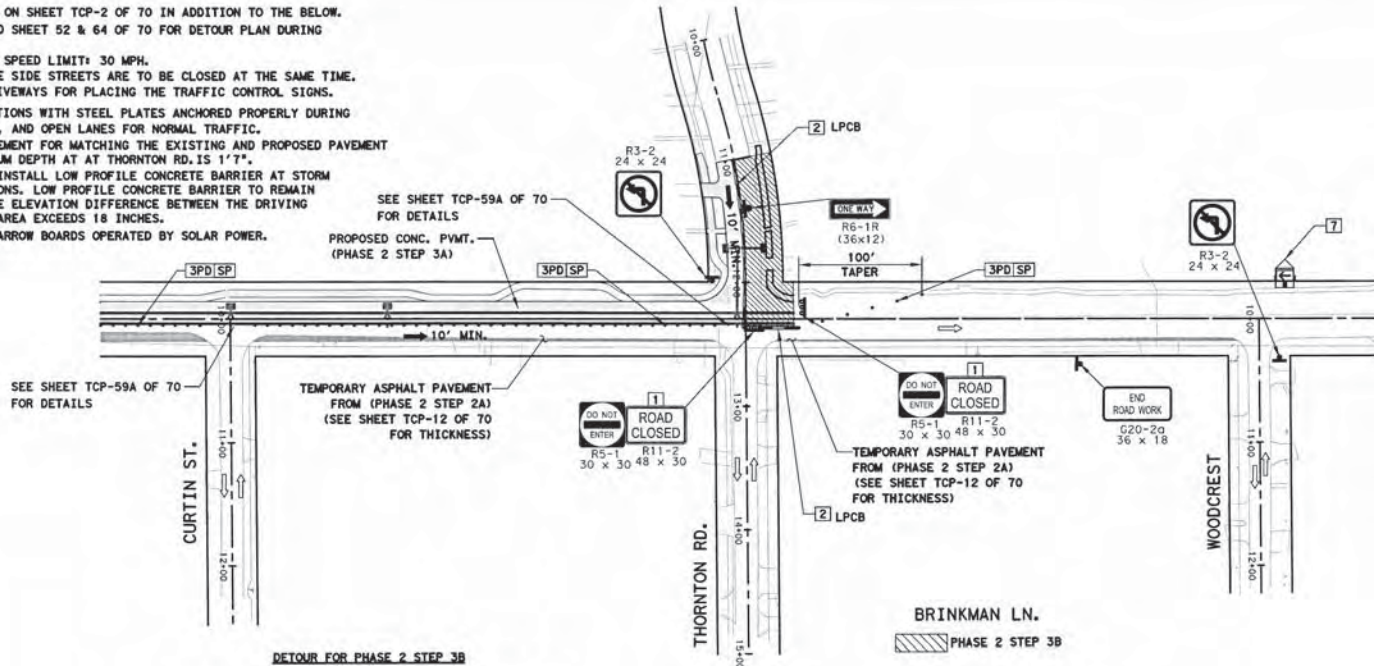
TCP-29 OF 70 SHEET 2 OF 7

WBS NUMBER	FOR CITY OF HOUSTON USE ONLY
M-000285-0001-4	
DRAWING SCALE	
1"=50'	
CITY OF HOUSTON PW	5630
JEFFREY T. HALL, P.E.	
SHEET NO. 212 OF 385	

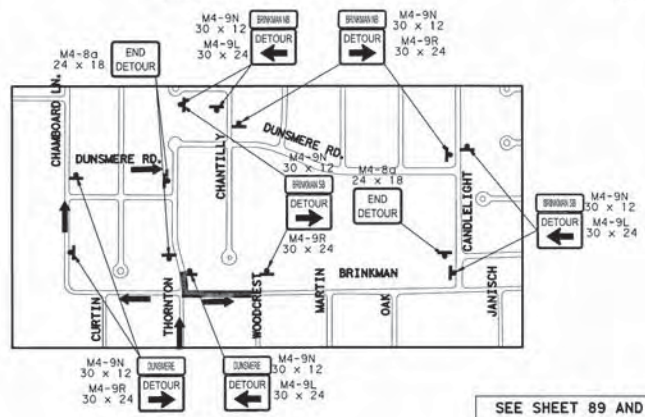
DATE: 2/14/2016 8:50:30 AM
PROJECT: 2015-2016 SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING - PHASE 2

NOTES:

1. SEE GENERAL NOTES ON SHEET TCP-2 OF 70 IN ADDITION TO THE BELOW.
2. SEE THIS SHEET AND SHEET 52 & 64 OF 70 FOR DETOUR PLAN DURING THIS PHASE/STEP.
3. CONSTRUCTION ZONE SPEED LIMIT: 30 MPH.
4. NO TWO CONSECUTIVE SIDE STREETS ARE TO BE CLOSED AT THE SAME TIME.
5. AVOID EXISTING DRIVEWAYS FOR PLACING THE TRAFFIC CONTROL SIGNS.
6. COVER OPEN EXCAVATIONS WITH STEEL PLATES ANCHORED PROPERLY DURING NON-WORKING HOURS, AND OPEN LANES FOR NORMAL TRAFFIC.
7. PLACE ASPHALT PAVEMENT FOR MATCHING THE EXISTING AND PROPOSED PAVEMENT ELEVATIONS. MAXIMUM DEPTH AT THORNTON RD. IS 1'7".
8. CONTRACTOR SHALL INSTALL LOW PROFILE CONCRETE BARRIER AT STORM SEWER WORK LOCATIONS. LOW PROFILE CONCRETE BARRIER TO REMAIN AT LOCATIONS WHERE ELEVATION DIFFERENCE BETWEEN THE DRIVING SURFACE AND WORK AREA EXCEEDS 18 INCHES.
9. INSTALL FLASHING ARROW BOARDS OPERATED BY SOLAR POWER.

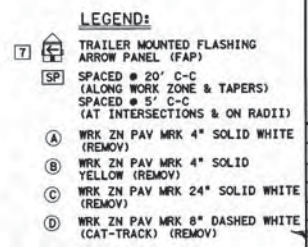


DETOUR FOR PHASE 2 STEP 3B



SEE SHEET 89 AND SHEET 119 FOR LIMITS OF HIGH EARLY STRENGTH CONCRETE

SEE SHEET 55 OF 70 SEE TYPICAL SHEET (TYP-2) FOR PLACEMENT OF TRAFFIC CONTROL SIGNS DURING THIS PHASE 2 STEP 3B



SDPS
Houston Storm Drainage Program Support

PGAL
3131 BRAYFARL, SUITE 200
Houston, Texas 77042
Phone (713) 822-1444
Fax (713) 968-9333

iSani
CONSULTANTS
3145 YELLOWSTONE BLVD
HOUSTON, TX 77054
TEL (713) 747-2399
FAX (713) 748-3748

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING TRAFFIC CONTROL PLAN PHASE 2 STEP 3B

TCP-30 OF 70 SHEET 3 OF 7

FOR CITY OF HOUSTON USE ONLY

5630

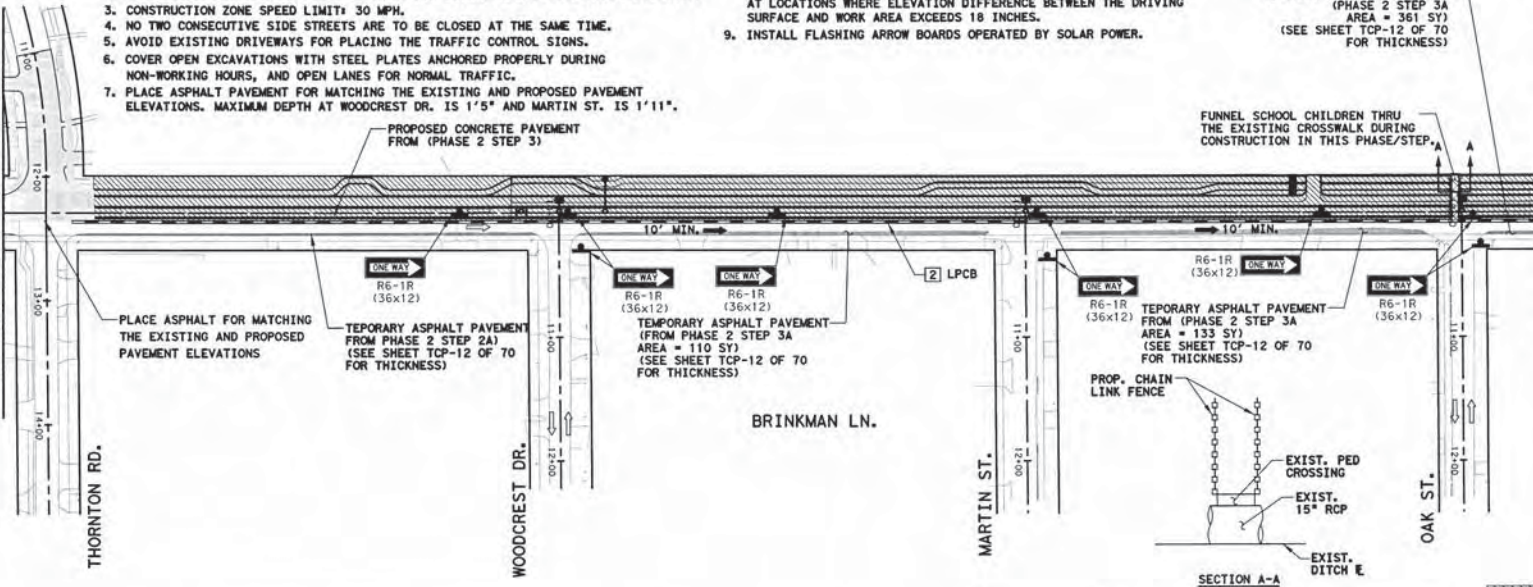
CITY OF HOUSTON PM
JEFFREY T. MALL, P.E.
SHEET NO. 213 OF 385

DATE: 8/24/2016 8:30:47 AM PROJECT: GARDEN OAKS TRAFFIC CONTROL PLAN - PHASE 2 STEP 4 (SHEET 4 OF 7)

- NOTES:**
- SEE GENERAL NOTES ON SHEET TCP-2 OF 70 IN ADDITION TO THE BELOW.
 - SEE THIS SHEET AND SHEET 52 & 64 OF 70 FOR DETOUR PLAN DURING THIS PHASE/STEP.
 - CONSTRUCTION ZONE SPEED LIMIT: 30 MPH.
 - NO TWO CONSECUTIVE SIDE STREETS ARE TO BE CLOSED AT THE SAME TIME.
 - AVOID EXISTING DRIVEWAYS FOR PLACING THE TRAFFIC CONTROL SIGNS.
 - COVER OPEN EXCAVATIONS WITH STEEL PLATES ANCHORED PROPERLY DURING NON-WORKING HOURS, AND OPEN LANES FOR NORMAL TRAFFIC.
 - PLACE ASPHALT PAVEMENT FOR MATCHING THE EXISTING AND PROPOSED PAVEMENT ELEVATIONS. MAXIMUM DEPTH AT WOODCREST DR. IS 1'5" AND MARTIN ST. IS 1'11".

- CONTRACTOR SHALL INSTALL LOW PROFILE CONCRETE BARRIER AT STORM SEWER WORK LOCATIONS. LOW PROFILE CONCRETE BARRIER TO REMAIN AT LOCATIONS WHERE ELEVATION DIFFERENCE BETWEEN THE DRIVING SURFACE AND WORK AREA EXCEEDS 18 INCHES.
- INSTALL FLASHING ARROW BOARDS OPERATED BY SOLAR POWER.

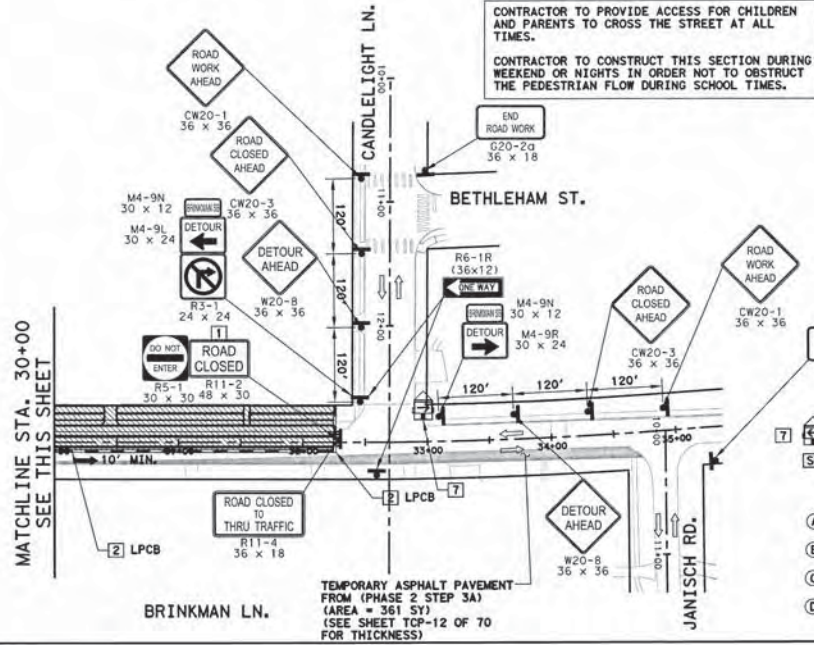
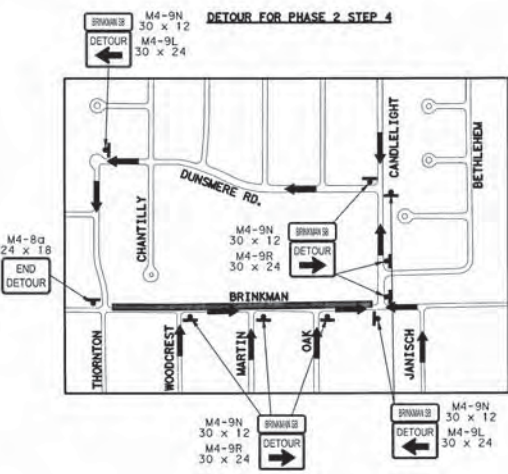
SEE SHEET 56 OF 70
TYPICAL SHEET (TYP-3) FOR PLACEMENT
OF TRAFFIC CONTROL SIGNAGE



SCALE: 1" = 30'

LEGEND:

- PERMANENT CONSTRUCTION WORK ZONE (PATTERN VARIES)
- PERMANENT CONSTRUCTION (PREVIOUS STEP)
- TEMPORARY ASPHALT PAVEMENT
- PLASTIC DRUM, CONE, OR TUBULAR MARKER
- PROPOSED SIGN POST
- TYPE III BARRICADE
- PROPOSED TRAFFIC FLOW
- EXISTING TRAFFIC FLOW
- LOW PROFILE CONCRETE BARRIER (LPCB) (TY 1 AND TY 2)
- PLASTIC DRUM (DRUM) (SEE LEGEND SP FOR SPACING)
- DRUM WITH CHEVRON (CW-8) ON EVERY OTHER DRUM (LEFT) (SEE LEGEND SP FOR SPACING)
- DRUM WITH CHEVRON (CW-8) ON EVERY OTHER DRUM (RIGHT) (SEE LEGEND SP FOR SPACING)
- DRUM WITH VERTICAL PANEL (SEE LEGEND SP FOR SPACING)
- TUBULAR MARKERS OR TRAFFIC CONES (SEE LEGEND SP FOR SPACING)



CONTRACTOR TO PROVIDE ACCESS FOR CHILDREN AND PARENTS TO CROSS THE STREET AT ALL TIMES.

CONTRACTOR TO CONSTRUCT THIS SECTION DURING WEEKEND OR NIGHTS IN ORDER NOT TO OBSTRUCT THE PEDESTRIAN FLOW DURING SCHOOL TIMES.

LEGEND:

- TRAILER MOUNTED FLASHING ARROW PANEL (FAP)
- SPACED # 20' C-C (ALONG WORK ZONE & TAPERS)
- SPACED # 5' C-C (AT INTERSECTIONS & ON RADIUS)
- WRK ZN PAV MKR 4" SOLID WHITE (REMOV)
- WRK ZN PAV MKR 4" SOLID YELLOW (REMOV)
- WRK ZN PAV MKR 24" SOLID WHITE (REMOV)
- WRK ZN PAV MKR 8" DASHED WHITE (CAT-TRACK) (REMOV)

SDPS
Houston Storm Drainage Program Support

PGAL
3131 BROADVIEW, SUITE 200
HOUSTON, TEXAS 77042
Phone: (713) 822-1444
Fax: (713) 868-8333

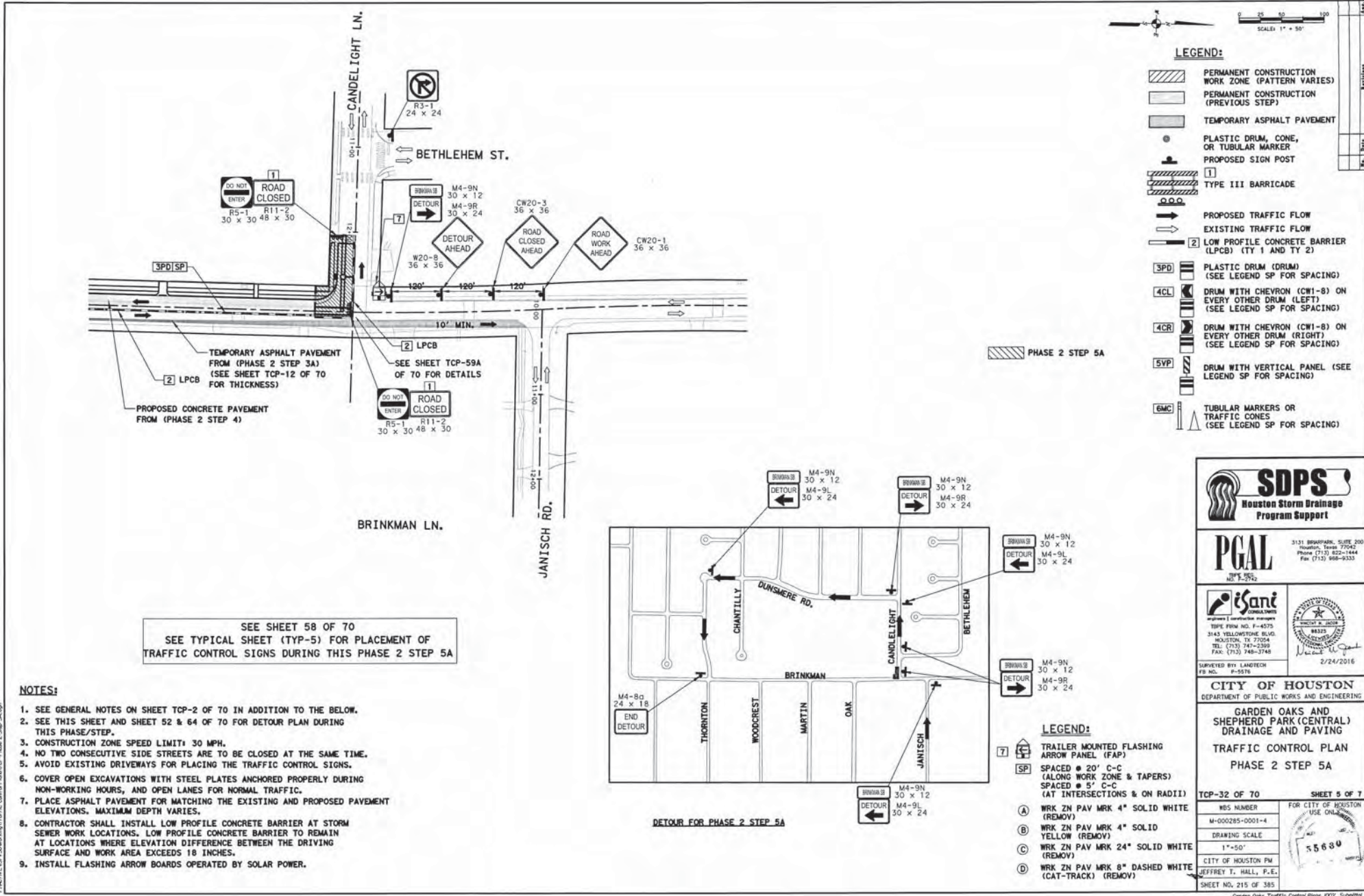
iSani
CONSULTANTS
3143 YELLOWSTONE BLVD.
HOUSTON, TX 77054
TEL: (713) 747-2399
FAX: (713) 748-3748

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING TRAFFIC CONTROL PLAN PHASE 2 STEP 4

TCP-31 OF 70 SHEET 4 OF 7

WBS NUMBER: M-000285-0001-4
DRAWING SCALE: 1"=50'
CITY OF HOUSTON PW
JEFFREY T. HALL, P.E.
SHEET NO. 214 OF 385

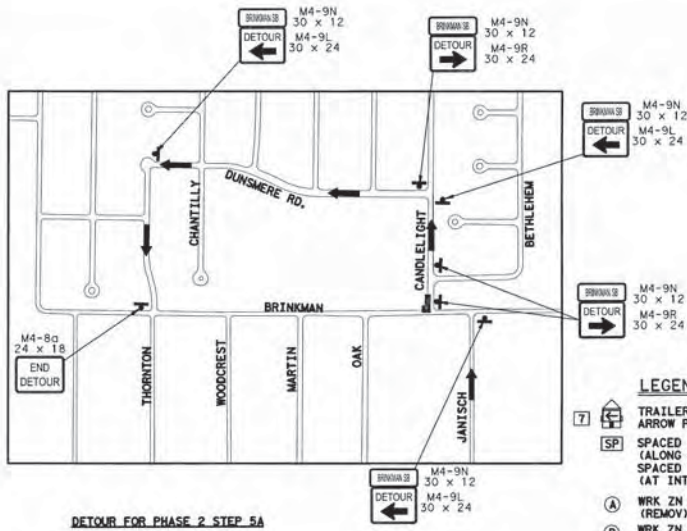


LEGEND:

- PERMANENT CONSTRUCTION WORK ZONE (PATTERN VARIES)
- PERMANENT CONSTRUCTION (PREVIOUS STEP)
- TEMPORARY ASPHALT PAVEMENT
- PLASTIC DRUM, CONE, OR TUBULAR MARKER
- PROPOSED SIGN POST
- TYPE III BARRICADE
- PROPOSED TRAFFIC FLOW
- EXISTING TRAFFIC FLOW
- LOW PROFILE CONCRETE BARRIER (LPCB) (TY 1 AND TY 2)
- PLASTIC DRUM (DRUM) (SEE LEGEND SP FOR SPACING)
- DRUM WITH CHEVRON (CW1-8) ON EVERY OTHER DRUM (LEFT) (SEE LEGEND SP FOR SPACING)
- DRUM WITH CHEVRON (CW1-8) ON EVERY OTHER DRUM (RIGHT) (SEE LEGEND SP FOR SPACING)
- DRUM WITH VERTICAL PANEL (SEE LEGEND SP FOR SPACING)
- TUBULAR MARKERS OR TRAFFIC CONES (SEE LEGEND SP FOR SPACING)

SEE SHEET 58 OF 70
SEE TYPICAL SHEET (TYP-5) FOR PLACEMENT OF TRAFFIC CONTROL SIGNS DURING THIS PHASE 2 STEP 5A

- NOTES:**
1. SEE GENERAL NOTES ON SHEET TCP-2 OF 70 IN ADDITION TO THE BELOW.
 2. SEE THIS SHEET AND SHEET 52 & 64 OF 70 FOR DETOUR PLAN DURING THIS PHASE/STEP.
 3. CONSTRUCTION ZONE SPEED LIMIT: 30 MPH.
 4. NO TWO CONSECUTIVE SIDE STREETS ARE TO BE CLOSED AT THE SAME TIME.
 5. AVOID EXISTING DRIVEWAYS FOR PLACING THE TRAFFIC CONTROL SIGNS.
 6. COVER OPEN EXCAVATIONS WITH STEEL PLATES ANCHORED PROPERLY DURING NON-WORKING HOURS, AND OPEN LANES FOR NORMAL TRAFFIC.
 7. PLACE ASPHALT PAVEMENT FOR MATCHING THE EXISTING AND PROPOSED PAVEMENT ELEVATIONS. MAXIMUM DEPTH VARIES.
 8. CONTRACTOR SHALL INSTALL LOW PROFILE CONCRETE BARRIER AT STORM SEWER WORK LOCATIONS. LOW PROFILE CONCRETE BARRIER TO REMAIN AT LOCATIONS WHERE ELEVATION DIFFERENCE BETWEEN THE DRIVING SURFACE AND WORK AREA EXCEEDS 18 INCHES.
 9. INSTALL FLASHING ARROW BOARDS OPERATED BY SOLAR POWER.



LEGEND:

- TRAILER MOUNTED FLASHING ARROW PANEL (FAP)
- SPACED # 20' C-C (ALONG WORK ZONE & TAPERS)
- SPACED # 5' C-C (AT INTERSECTIONS & ON RADII)
- A** WRK ZN PAV MRK 4" SOLID WHITE (REMOV)
- B** WRK ZN PAV MRK 4" SOLID YELLOW (REMOV)
- C** WRK ZN PAV MRK 24" SOLID WHITE (REMOV)
- D** WRK ZN PAV MRK 8" DASHED WHITE (CAT-TRACK) (REMOV)

SDPS
Houston Storm Drainage Program Support

PGAL
3131 Bellaire Blvd, Suite 200
Houston, Texas 77042
Phone: (713) 822-1444
Fax: (713) 868-9333

iSani
CONSULTANTS
3145 YELLOWSTONE BLVD
HOUSTON, TX 77054
TEL: (713) 747-2369
FAX: (713) 748-3748

SUPERVED BY: LANDTECH
PR. NO.: 0-5576
2/24/2016

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING TRAFFIC CONTROL PLAN PHASE 2 STEP 5A

TCP-32 OF 70 SHEET 5 OF 7

WBS NUMBER	FOR CITY OF HOUSTON USE ONLY
M-000285-0001-4	
DRAWING SCALE	
1"=50'	
CITY OF HOUSTON PM	
JEFFREY T. HALL, P.E.	
SHEET NO. 215 OF 385	

DATE: 2/24/2016 8:33:34 AM P:\ACT\13\1305\Drawings\Traffic\Control Plans\TCP-Phase 2-Step 5A.dwg

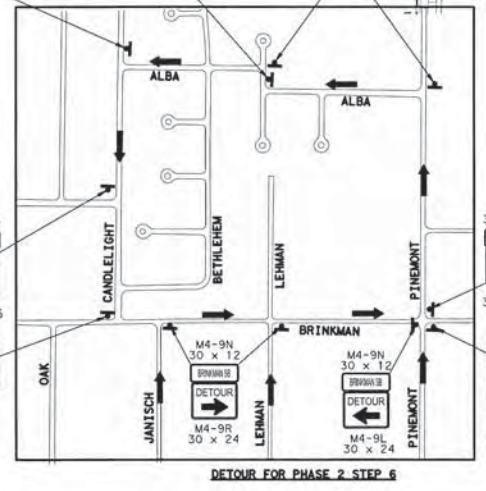
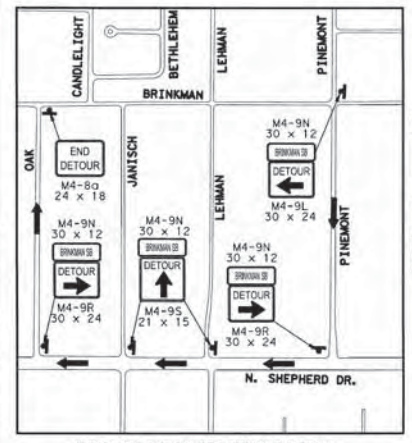
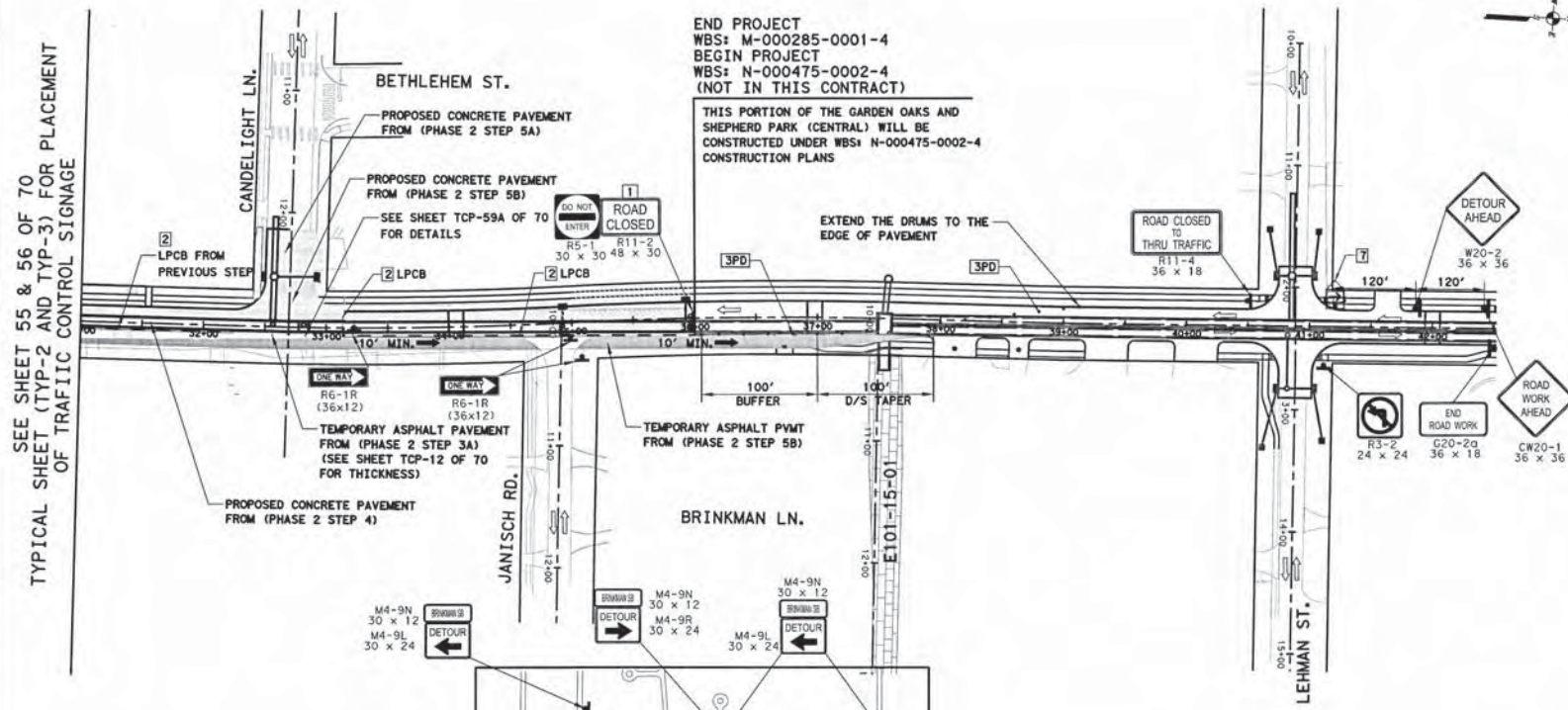
SEE SHEET 55 & 56 OF 70
TYPICAL SHEET (TYP-2 AND TYP-3) FOR PLACEMENT
OF TRAFFIC CONTROL SIGNAGE



- LEGEND:**
- PERMANENT CONSTRUCTION WORK ZONE (PATTERN VARIES)
 - PERMANENT CONSTRUCTION (PREVIOUS STEP)
 - TEMPORARY ASPHALT PAVEMENT
 - PLASTIC DRUM, CONE, OR TUBULAR MARKER
 - PROPOSED SIGN POST
 - TYPE III BARRICADE
 - PROPOSED TRAFFIC FLOW
 - EXISTING TRAFFIC FLOW
 - LOW PROFILE CONCRETE BARRIER (LPCB) (TY 1 AND TY 2)
 - PLASTIC DRUM (DRUM) (SEE LEGEND SP FOR SPACING)
 - DRUM WITH CHEVRON (CW1-B) ON EVERY OTHER DRUM (LEFT) (SEE LEGEND SP FOR SPACING)
 - DRUM WITH CHEVRON (CW1-B) ON EVERY OTHER DRUM (RIGHT) (SEE LEGEND SP FOR SPACING)
 - DRUM WITH VERTICAL PANEL (SEE LEGEND SP FOR SPACING)
 - TUBULAR MARKERS OR TRAFFIC CONES (SEE LEGEND SP FOR SPACING)

END PROJECT
WBS: M-000285-0001-4
BEGIN PROJECT
WBS: N-000475-0002-4
(NOT IN THIS CONTRACT)

THIS PORTION OF THE GARDEN OAKS AND SHEPHERD PARK (CENTRAL) WILL BE CONSTRUCTED UNDER WBS: N-000475-0002-4 CONSTRUCTION PLANS



- NOTES:**
- SEE GENERAL NOTES ON SHEET TCP-2 OF 70 IN ADDITION TO THE BELOW.
 - SEE THIS SHEET AND SHEET 52 & 64 OF 70 FOR DETOUR PLAN DURING THIS PHASE/STEP.
 - CONSTRUCTION ZONE SPEED LIMIT: 30 MPH.
 - NO TWO CONSECUTIVE SIDE STREETS ARE TO BE CLOSED AT THE SAME TIME.
 - AVOID EXISTING DRIVEWAYS FOR PLACING THE TRAFFIC CONTROL SIGNS.
 - COVER OPEN EXCAVATIONS WITH STEEL PLATES ANCHORED PROPERLY DURING NON-WORKING HOURS, AND OPEN LANES FOR NORMAL TRAFFIC.
 - PLACE ASPHALT PAVEMENT FOR MATCHING THE EXISTING AND PROPOSED PAVEMENT ELEVATIONS. MAXIMUM DEPTH AT JANISCH RD. IS 2' 3".
 - CONTRACTOR SHALL INSTALL LOW PROFILE CONCRETE BARRIER AT STORM SEWER WORK LOCATIONS. LOW PROFILE CONCRETE BARRIER TO REMAIN AT LOCATIONS WHERE ELEVATION DIFFERENCE BETWEEN THE DRIVING SURFACE AND WORK AREA EXCEEDS 18 INCHES.
 - INSTALL FLASHING ARROW BOARDS OPERATED BY SOLAR POWER.

- LEGEND:**
- TRAILER MOUNTED FLASHING ARROW PANEL (FAP)
 - SPACED # 20" C-C (ALONG WORK ZONE & TAPERS)
 - SPACED # 5' C-C (AT INTERSECTIONS & ON RADIUS)
 - WRK ZN PAV MRK 4" SOLID WHITE (REMOV)
 - WRK ZN PAV MRK 4" SOLID YELLOW (REMOV)
 - WRK ZN PAV MRK 24" SOLID WHITE (REMOV)
 - WRK ZN PAV MRK 8" DASHED WHITE (CAT-TRACK) (REMOV)

SEE SHEET 55 & 56 OF 70
SEE TYPICAL SHEETS (TYP-2 AND TYP-3) FOR PLACEMENT OF
TRAFFIC CONTROL SIGNAGE DURING THIS PHASE 2 STEP 6

SDPS
Houston Storm Drainage Program Support

PGAL
3131 BRINKMAN, SUITE 200
HOUSTON, TEXAS 77004
PHONE (713) 822-1444
FAX (713) 958-8233

iSani CONSULTANTS
3143 YELLOWSTONE BLVD.
HOUSTON, TX 77054
TEL: (713) 749-2359
FAX: (713) 749-3746
SUPERVISED BY: LANDTECH
P.E. NO. P-15576
2/24/2016

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING
TRAFFIC CONTROL PLAN
PHASE 2 STEP 6

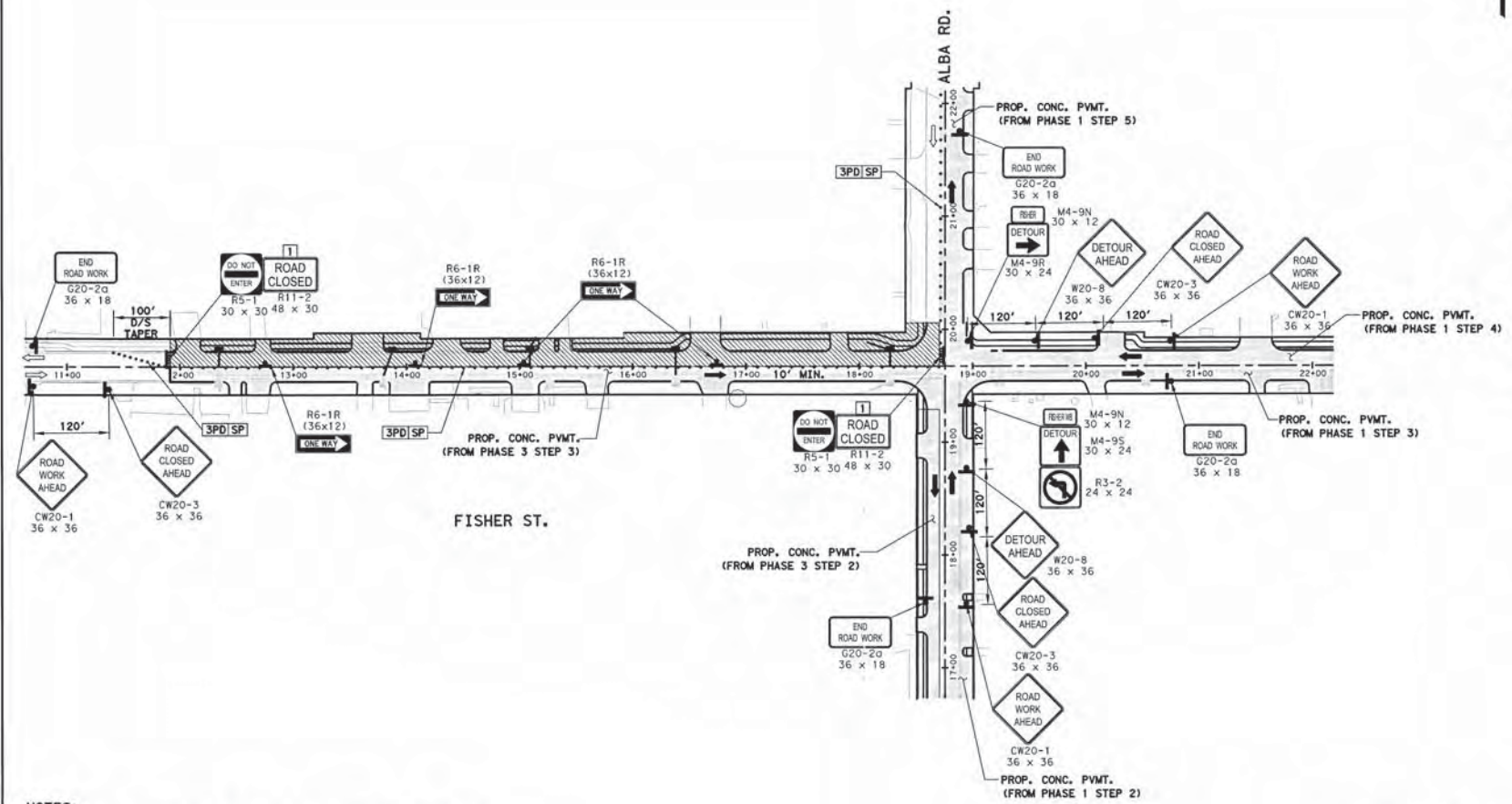
TCP-34 OF 70 SHEET 7 OF 7
FOR CITY OF HOUSTON USE ONLY
5630
CITY OF HOUSTON PM
JEFFREY T. HALL, P.E.
SHEET NO. 217 OF 365

DATE: 2/24/2016 9:39:59 AM
PROJECT: GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING - PHASE 2 STEP 6



LEGEND:

- PERMANENT CONSTRUCTION WORK ZONE (PATTERN VARIES)
- PERMANENT CONSTRUCTION (PREVIOUS STEP)
- TEMPORARY ASPHALT PAVEMENT
- PLASTIC DRUM, CONE, OR TUBULAR MARKER PROPOSED SIGN POST
- TYPE III BARRICADE
- PROPOSED TRAFFIC FLOW
- EXISTING TRAFFIC FLOW
- LOW PROFILE CONCRETE BARRIER (LPCB) (TY 1 AND TY 2)
- PLASTIC DRUM (DRUM) (SEE LEGEND SP FOR SPACING)
- DRUM WITH CHEVRON (CW1-8) ON EVERY OTHER DRUM (LEFT) (SEE LEGEND SP FOR SPACING)
- DRUM WITH CHEVRON (CW1-8) ON EVERY OTHER DRUM (RIGHT) (SEE LEGEND SP FOR SPACING)
- DRUM WITH VERTICAL PANEL (SEE LEGEND SP FOR SPACING)
- TUBULAR MARKERS OR TRAFFIC CONES (SEE LEGEND SP FOR SPACING)



- NOTES:**
1. SEE GENERAL NOTES ON SHEET TCP-2 OF 70 IN ADDITION TO THE BELOW.
 2. SEE THIS SHEET AND SHEET 52 & 64 OF 70 FOR DETOUR PLAN DURING THIS PHASE/STEP.
 3. CONSTRUCTION ZONE SPEED LIMIT: 30 MPH.
 4. NO TWO CONSECUTIVE SIDE STREETS ARE TO BE CLOSED AT THE SAME TIME.
 5. AVOID EXISTING DRIVEWAYS FOR PLACING THE TRAFFIC CONTROL SIGNS.
 6. COVER OPEN EXCAVATIONS WITH STEEL PLATES ANCHORED PROPERLY DURING NON-WORKING HOURS, AND OPEN LANES FOR NORMAL TRAFFIC.
 7. PLACE ASPHALT PAVEMENT FOR MATCHING THE EXISTING AND PROPOSED PAVEMENT ELEVATIONS. MAXIMUM DEPTH VARIES.
 8. CONTRACTOR SHALL INSTALL LOW PROFILE CONCRETE BARRIER AT STORM SEWER WORK LOCATIONS. LOW PROFILE CONCRETE BARRIER TO REMAIN AT LOCATIONS WHERE ELEVATION DIFFERENCE BETWEEN THE DRIVING SURFACE AND WORK AREA EXCEEDS 18 INCHES.
 9. INSTALL FLASHING ARROW BOARDS OPERATED BY SOLAR POWER.

LEGEND:

- PHASE 3 STEP 4
- TRAILER MOUNTED FLASHING ARROW PANEL (FAP)
- SPACED # 20' C-C (ALONG WORK ZONE & TAPERS) SPACED # 5' C-C (AT INTERSECTIONS & ON RADII)
- WRK ZN PAV MRK 4" SOLID WHITE (REMOV)
- WRK ZN PAV MRK 4" SOLID YELLOW (REMOV)
- WRK ZN PAV MRK 24" SOLID WHITE (REMOV)
- WRK ZN PAV MRK 8" DASHED WHITE (CAT-TRACK) (REMOV)

SDPS
Houston Storm Drainage Program Support

PGAL
3131 BELLFARM, SUITE 200
HOUSTON, TEXAS 77064
Phone: (713) 622-1444
Fax: (713) 668-9333

isanti CONSULTANTS
3143 YELLOWSTONE BLVD.
HOUSTON, TX 77054
TEL: (713) 747-2359
FAX: (713) 748-3748

2/24/2016

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

TRAFFIC CONTROL PLAN

PHASE 3 STEP 4

TCP-38 OF 70 SHEET 4 OF 10

WBS NUMBER: M-000285-0001-4
DRAWING SCALE: 1"=50'
CITY OF HOUSTON PM: JEFFREY T. HALL, P.E.
SHEET NO. 221 OF 385

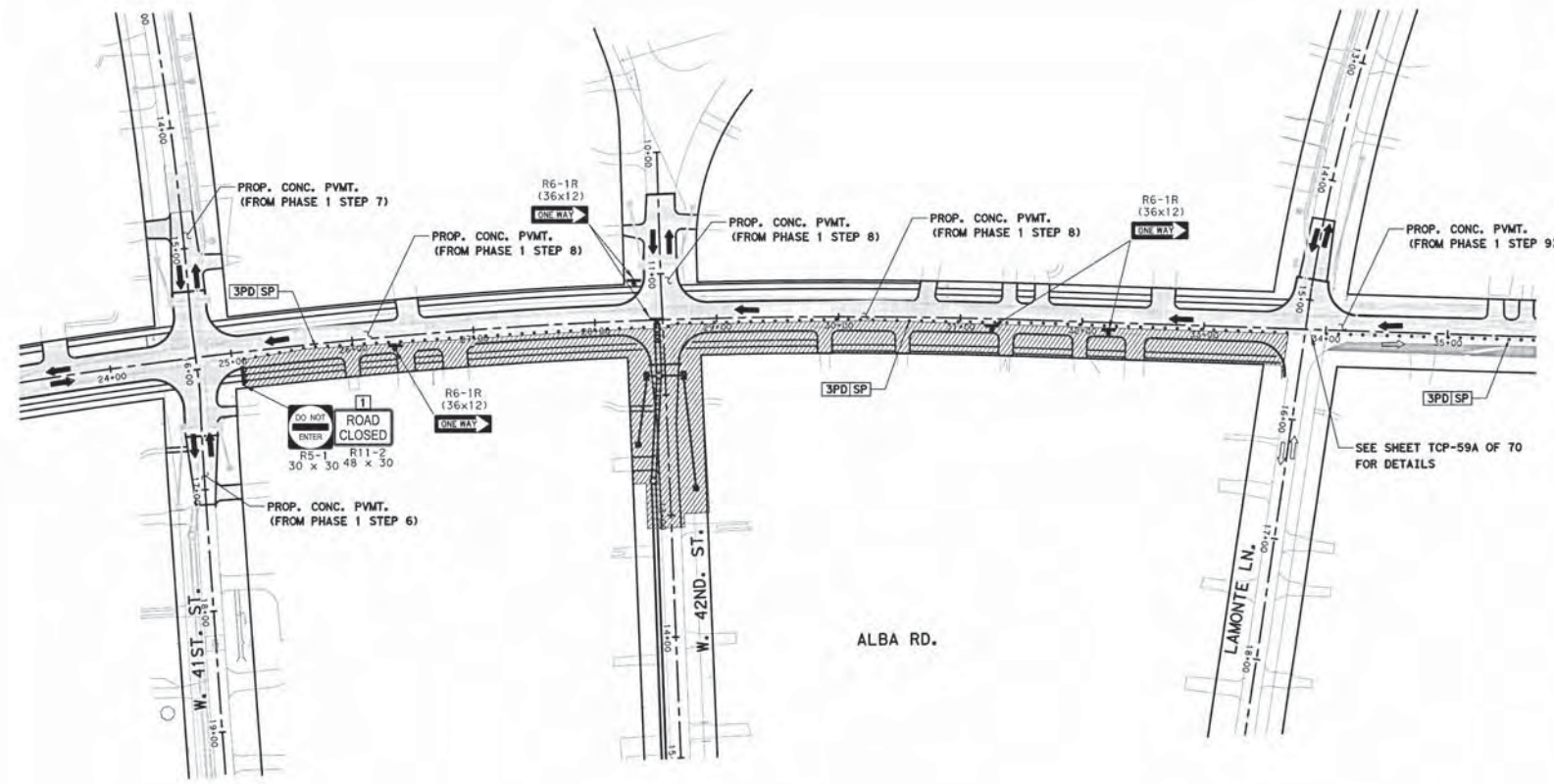
FOR CITY OF HOUSTON USE ONLY
55630

DATE: 2/24/2016 9:35:42 AM
PROJECT: C:\Users\jhall\Documents\Traffic Control Plans\TCP-Phase 3-Step 4.dwg



LEGEND:

- PERMANENT CONSTRUCTION WORK ZONE (PATTERN VARIES)
- PERMANENT CONSTRUCTION (PREVIOUS STEP)
- TEMPORARY ASPHALT PAVEMENT
- PLASTIC DRUM, CONE, OR TUBULAR MARKER
- PROPOSED SIGN POST
- [1] TYPE III BARRICADE
- PROPOSED TRAFFIC FLOW
- EXISTING TRAFFIC FLOW
- [2] LOW PROFILE CONCRETE BARRIER (LPCB) (TY 1 AND TY 2)
- 3PD PLASTIC DRUM (DRUM) (SEE LEGEND SP FOR SPACING)
- 4CL DRUM WITH CHEVRON (CW1-B) ON EVERY OTHER DRUM (LEFT) (SEE LEGEND SP FOR SPACING)
- 4CR DRUM WITH CHEVRON (CW1-B) ON EVERY OTHER DRUM (RIGHT) (SEE LEGEND SP FOR SPACING)
- 5VP DRUM WITH VERTICAL PANEL (SEE LEGEND SP FOR SPACING)
- GMC TUBULAR MARKERS OR TRAFFIC CONES (SEE LEGEND SP FOR SPACING)



SEE SHEET TCP-59A OF 70 FOR DETAILS

ALBA RD.

SEE SHEET 55 OF 70
SEE TYPICAL SHEET (TYP-2) FOR PLACEMENT OF TRAFFIC CONTROL SIGNS DURING THIS PHASE 3 STEP 6

NOTES:

1. SEE GENERAL NOTES ON SHEET TCP-2 OF 70 IN ADDITION TO THE BELOW.
2. SEE THIS SHEET AND SHEET 52 & 64 OF 70 FOR DETOUR PLAN DURING THIS PHASE/STEP.
3. CONSTRUCTION ZONE SPEED LIMIT: 30 MPH.
4. NO TWO CONSECUTIVE SIDE STREETS ARE TO BE CLOSED AT THE SAME TIME.
5. AVOID EXISTING DRIVEWAYS FOR PLACING THE TRAFFIC CONTROL SIGNS.
6. COVER OPEN EXCAVATIONS WITH STEEL PLATES ANCHORED PROPERLY DURING NON-WORKING HOURS, AND OPEN LANES FOR NORMAL TRAFFIC.
7. PLACE ASPHALT PAVEMENT FOR MATCHING THE EXISTING AND PROPOSED PAVEMENT ELEVATIONS. MAXIMUM DEPTH VARIES.
8. CONTRACTOR SHALL INSTALL LOW PROFILE CONCRETE BARRIER AT STORM SEWER WORK LOCATIONS. LOW PROFILE CONCRETE BARRIER TO REMAIN AT LOCATIONS WHERE ELEVATION DIFFERENCE BETWEEN THE DRIVING SURFACE AND WORK AREA EXCEEDS 18 INCHES.
9. INSTALL FLASHING ARROW BOARDS OPERATED BY SOLAR POWER.

PHASE 3 STEP 6

LEGEND:

- [7] TRAILER MOUNTED FLASHING ARROW PANEL (FAP)
- SP SPACED @ 20' C-C (ALONG WORK ZONE & TAPERS) SPACED @ 5' C-C (AT INTERSECTIONS & ON RADII)
- A WRK ZN PAV MRK 4" SOLID WHITE (REMOV)
- B WRK ZN PAV MRK 4" SOLID YELLOW (REMOV)
- C WRK ZN PAV MRK 24" SOLID WHITE (REMOV)
- D WRK ZN PAV MRK 8" DASHED WHITE (CAT-TRACK) (REMOV)

SDPS
Houston Storm Drainage Program Support

PGAL
TYPE III
NO. F-292

3131 BISHOP PARK, SUITE 200
HOUSTON, TEXAS 77042
PHONE (713) 622-1414
FAX (713) 988-8333

iSani CONSULTANTS
Professional Engineering Firm
TYPE FIRM NO. F-4575
3143 YELLOWSTONE BLVD.
HOUSTON, TX 77054
TEL: (713) 747-2369
FAX: (713) 748-3748

2/24/2016

SURVEYED BY: LANETECH
FB NO. F-5576

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING
TRAFFIC CONTROL PLAN
PHASE 3 STEP 6

TCP-40 OF 70 SHEET 6 OF 10

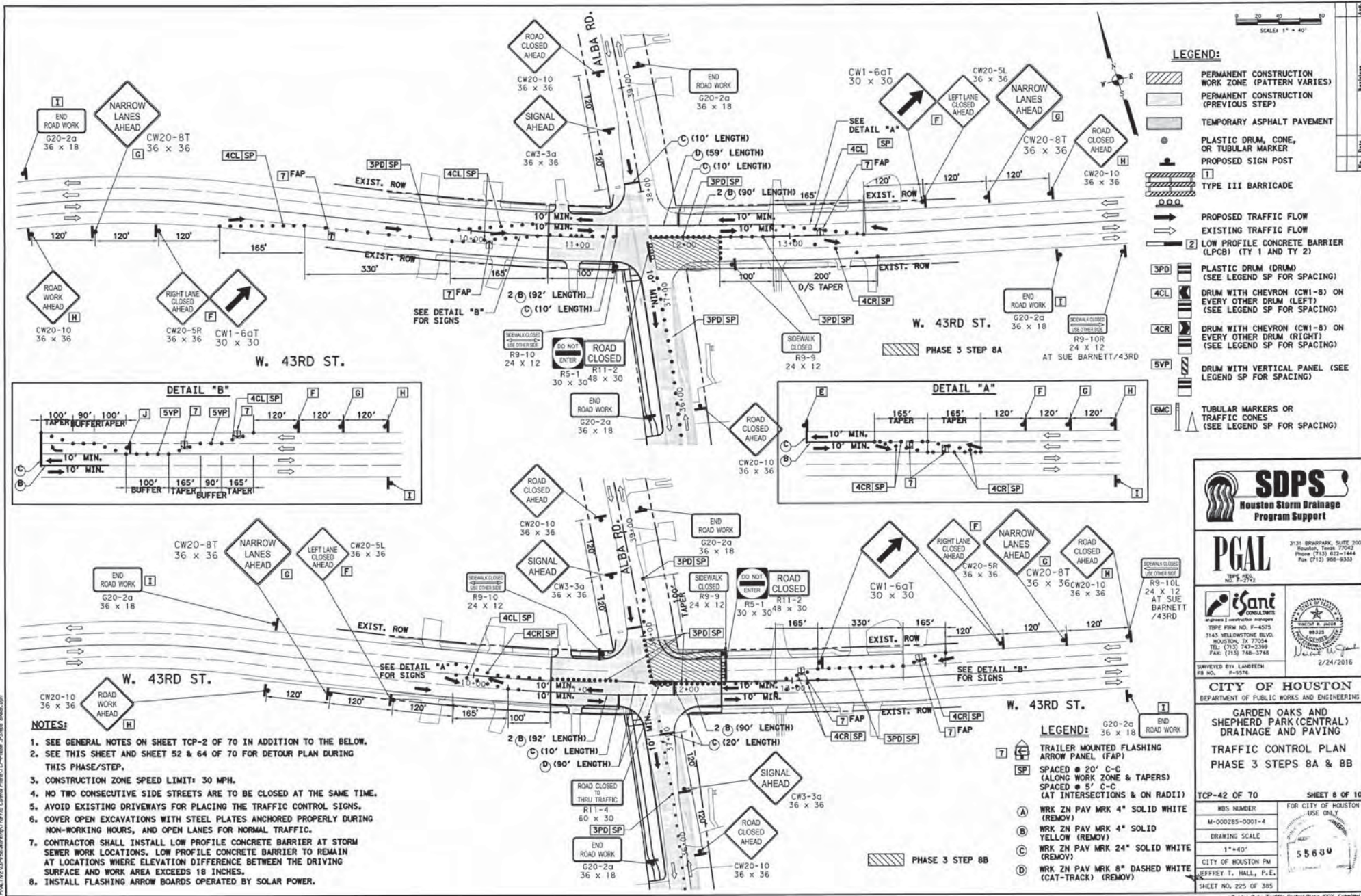
MIS NUMBER: M-000285-0001-4 FOR CITY OF HOUSTON USE ONLY

DRAWING SCALE: 1"=50'

CITY OF HOUSTON PM: JEFFREY T. HALL, P.E.

SHEET NO. 223 OF 385

DATE: 2/24/2016 9:30:59 AM 3/26/2016 JAM
PATH: C:\Users\jham\OneDrive\Documents\Projects\2016\2016-02-24\Garden Oaks Traffic Control Plans\2016-02-24.dwg



- LEGEND:**
- PERMANENT CONSTRUCTION WORK ZONE (PATTERN VARIES)
 - PERMANENT CONSTRUCTION (PREVIOUS STEP)
 - TEMPORARY ASPHALT PAVEMENT
 - PLASTIC DRUM, CONE, OR TUBULAR MARKER
 - PROPOSED SIGN POST
 - TYPE III BARRICADE
 - PROPOSED TRAFFIC FLOW
 - EXISTING TRAFFIC FLOW
 - LOW PROFILE CONCRETE BARRIER (LPCB) (TY 1 AND TY 2)
 - 3PD PLASTIC DRUM (DRUM) (SEE LEGEND SP FOR SPACING)
 - 4CL DRUM WITH CHEVRON (CW1-8) ON EVERY OTHER DRUM (LEFT) (SEE LEGEND SP FOR SPACING)
 - 4CR DRUM WITH CHEVRON (CW1-8) ON EVERY OTHER DRUM (RIGHT) (SEE LEGEND SP FOR SPACING)
 - 5VP DRUM WITH VERTICAL PANEL (SEE LEGEND SP FOR SPACING)
 - EMC TUBULAR MARKERS OR TRAFFIC CONES (SEE LEGEND SP FOR SPACING)

- NOTES:**
1. SEE GENERAL NOTES ON SHEET TCP-2 OF 70 IN ADDITION TO THE BELOW.
 2. SEE THIS SHEET AND SHEET 52 & 64 OF 70 FOR DETOUR PLAN DURING THIS PHASE/STEP.
 3. CONSTRUCTION ZONE SPEED LIMIT: 30 MPH.
 4. NO TWO CONSECUTIVE SIDE STREETS ARE TO BE CLOSED AT THE SAME TIME.
 5. AVOID EXISTING DRIVEWAYS FOR PLACING THE TRAFFIC CONTROL SIGNS.
 6. COVER OPEN EXCAVATIONS WITH STEEL PLATES ANCHORED PROPERLY DURING NON-WORKING HOURS, AND OPEN LANES FOR NORMAL TRAFFIC.
 7. CONTRACTOR SHALL INSTALL LOW PROFILE CONCRETE BARRIER AT STORM SEWER WORK LOCATIONS. LOW PROFILE CONCRETE BARRIER TO REMAIN AT LOCATIONS WHERE ELEVATION DIFFERENCE BETWEEN THE DRIVING SURFACE AND WORK AREA EXCEEDS 18 INCHES.
 8. INSTALL FLASHING ARROW BOARDS OPERATED BY SOLAR POWER.

- LEGEND:**
- G20-2g END ROAD WORK
 - TRAILER MOUNTED FLASHING ARROW PANEL (FAP)
 - SPACED @ 20' C-C (ALONG WORK ZONE & TAPERS) (AT INTERSECTIONS & ON RADIUS)
 - WRK ZN PAV MKR 4" SOLID WHITE (REMOV)
 - WRK ZN PAV MKR 4" SOLID YELLOW (REMOV)
 - WRK ZN PAV MKR 24" SOLID WHITE (REMOV)
 - WRK ZN PAV MKR 8" DASHED WHITE (CAT-TRACK) (REMOV)

SDPS
Houston Storm Drainage Program Support

PG&L
3131 Springdale, Suite 200
Houston, Texas 77042
Phone: (713) 823-1444
Fax: (713) 968-9333

isani
CONSULTANTS
3143 YELLOWSTONE BLVD.
HOUSTON, TX 77054
TEL: (713) 747-2369
FAX: (713) 740-3748

APPROVED BY: LANTRECH
1/8 NO. 18-0376

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

TRAFFIC CONTROL PLAN
PHASE 3 STEPS 8A & 8B

TCP-42 OF 70 SHEET 8 OF 10

FOR CITY OF HOUSTON USE ONLY

DRAWING SCALE: 1"=40'

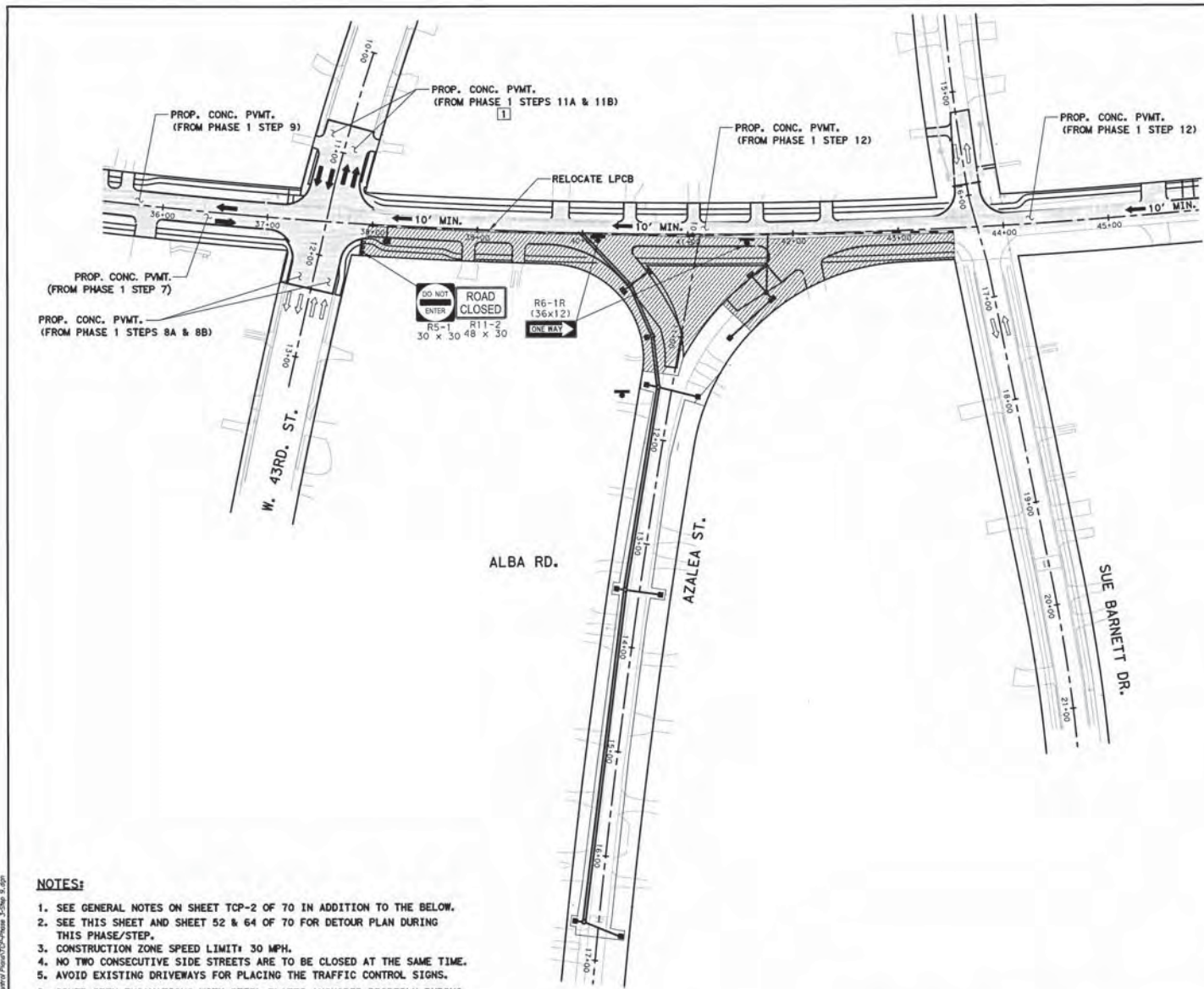
CITY OF HOUSTON PM: JEFFREY T. HALL, P.E.

SHEET NO. 225 OF 385

55634

Garden Oaks Traffic Control Plans_0001_Submittal

DATE: 1/24/2016 9:40:00 AM
PROJECT: SDPS SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING - 5-Step 8A & 8B



LEGEND:

- PERMANENT CONSTRUCTION WORK ZONE (PATTERN VARIES)
- PERMANENT CONSTRUCTION (PREVIOUS STEP)
- TEMPORARY ASPHALT PAVEMENT
- PLASTIC DRUM, CONE, OR TUBULAR MARKER
- PROPOSED SIGN POST
- 1 TYPE III BARRICADE
- PROPOSED TRAFFIC FLOW
- EXISTING TRAFFIC FLOW
- 2 LOW PROFILE CONCRETE BARRIER (LPCB) (TY 1 AND TY 2)
- 3PD PLASTIC DRUM (DRUM) (SEE LEGEND SP FOR SPACING)
- 4CL DRUM WITH CHEVRON (CW1-8) ON EVERY OTHER DRUM (LEFT) (SEE LEGEND SP FOR SPACING)
- 4CR DRUM WITH CHEVRON (CW1-8) ON EVERY OTHER DRUM (RIGHT) (SEE LEGEND SP FOR SPACING)
- 5VP DRUM WITH VERTICAL PANEL (SEE LEGEND SP FOR SPACING)
- 6MC TUBULAR MARKERS OR TRAFFIC CONES (SEE LEGEND SP FOR SPACING)

SDPS
Houston Storm Drainage Program Support

PGAL
3131 BRADSHAW, SUITE 200
HOUSTON, TEXAS 77042
PHONE (713) 822-1444
FAX (713) 988-9333

isanti
CONSTRUCTION
3143 YELLOWSTONE BLVD.
HOUSTON, TX 77054
TEL: (713) 747-2399
FAX: (713) 746-3748

SURVEYED BY: LANITECH
FB NO.: B-45576

2/24/2016

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING TRAFFIC CONTROL PLAN
PHASE 3 STEP 9

TCP-43 OF 70 SHEET 9 OF 10

WBS NUMBER	FOR CITY OF HOUSTON USE ONLY
M-000285-0001-4	
DRAWING SCALE	
1"=50'	
CITY OF HOUSTON PW	
JEFFREY T. HALL, P.E.	
SHEET NO. 226 OF 385	

SEE SHEET 55 OF 70
SEE TYPICAL SHEET (TYP-2) FOR PLACEMENT OF TRAFFIC CONTROL SIGNS DURING THIS PHASE 3 STEP 9

LEGEND:

- TRAILER MOUNTED FLASHING ARROW PANEL (FAP)
- SP SPACED @ 20' C-C (ALONG WORK ZONE & TAPERS) SPACED @ 5' C-C (AT INTERSECTIONS & ON RADIUS)
- A WRK ZN PAV MRK 4" SOLID WHITE (REMOV)
- B WRK ZN PAV MRK 4" SOLID YELLOW (REMOV)
- C WRK ZN PAV MRK 24" SOLID WHITE (REMOV)
- D WRK ZN PAV MRK 8" DASHED WHITE (CAT-TRACK) (REMOV)

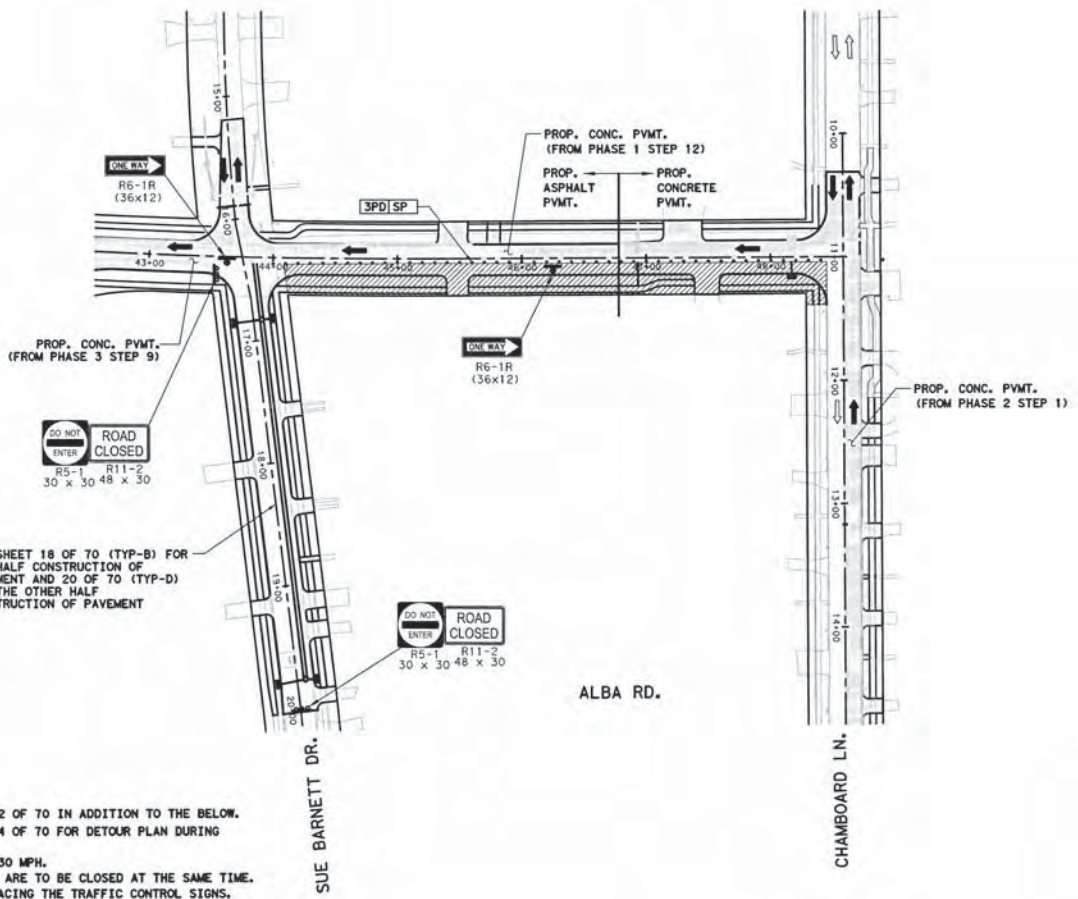
- NOTES:**
- SEE GENERAL NOTES ON SHEET TCP-2 OF 70 IN ADDITION TO THE BELOW.
 - SEE THIS SHEET AND SHEET 52 & 64 OF 70 FOR DETOUR PLAN DURING THIS PHASE/STEP.
 - CONSTRUCTION ZONE SPEED LIMIT: 30 MPH.
 - NO TWO CONSECUTIVE SIDE STREETS ARE TO BE CLOSED AT THE SAME TIME.
 - AVOID EXISTING DRIVEWAYS FOR PLACING THE TRAFFIC CONTROL SIGNS.
 - COVER OPEN EXCAVATIONS WITH STEEL PLATES ANCHORED PROPERLY DURING NON-WORKING HOURS, AND OPEN LANES FOR NORMAL TRAFFIC.
 - PLACE ASPHALT PAVEMENT FOR MATCHING THE EXISTING AND PROPOSED PAVEMENT ELEVATIONS. MAXIMUM DEPTH VARIES.
 - CONTRACTOR SHALL INSTALL LOW PROFILE CONCRETE BARRIER AT STORM SEWER WORK LOCATIONS. LOW PROFILE CONCRETE BARRIER TO REMAIN AT LOCATIONS WHERE ELEVATION DIFFERENCE BETWEEN THE DRIVING SURFACE AND WORK AREA EXCEEDS 18 INCHES.
 - INSTALL FLASHING ARROW BOARDS OPERATED BY SOLAR POWER.

DATE: 07/24/2016 9:40:07 AM
PROJECT: GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING PHASE 3 STEP 9



LEGEND:

- PERMANENT CONSTRUCTION WORK ZONE (PATTERN VARIES)
- PERMANENT CONSTRUCTION (PREVIOUS STEP)
- TEMPORARY ASPHALT PAVEMENT
- PLASTIC DRUM, CONE, OR TUBULAR MARKER
- PROPOSED SIGN POST
- TYPE III BARRICADE
- PROPOSED TRAFFIC FLOW
- EXISTING TRAFFIC FLOW
- LOW PROFILE CONCRETE BARRIER (LPCB) (TY 1 AND TY 2)
- PLASTIC DRUM (DRUM) (SEE LEGEND SP FOR SPACING)
- DRUM WITH CHEVRON (CW1-8) ON EVERY OTHER DRUM (LEFT) (SEE LEGEND SP FOR SPACING)
- DRUM WITH CHEVRON (CW1-8) ON EVERY OTHER DRUM (RIGHT) (SEE LEGEND SP FOR SPACING)
- DRUM WITH VERTICAL PANEL (SEE LEGEND SP FOR SPACING)
- TUBULAR MARKERS OR TRAFFIC CONES (SEE LEGEND SP FOR SPACING)



SEE SHEET 18 OF 70 (TYP-B) FOR ONE HALF CONSTRUCTION OF PAVEMENT AND 20 OF 70 (TYP-D) FOR THE OTHER HALF CONSTRUCTION OF PAVEMENT

DO NOT ENTER ROAD CLOSED R5-1 R11-2 30 x 30 48 x 30

SEE SHEET 57 OR SHEET 59 OF 70
SEE TYPICAL SHEET (TYP-6) FOR PLACEMENT OF TRAFFIC CONTROL SIGNS DURING THIS PHASE 3 STEP 10

NOTES:

1. SEE GENERAL NOTES ON SHEET TCP-2 OF 70 IN ADDITION TO THE BELOW.
2. SEE THIS SHEET AND SHEET 52 & 64 OF 70 FOR DETOUR PLAN DURING THIS PHASE/STEP.
3. CONSTRUCTION ZONE SPEED LIMIT 30 MPH.
4. NO TWO CONSECUTIVE SIDE STREETS ARE TO BE CLOSED AT THE SAME TIME.
5. AVOID EXISTING DRIVEWAYS FOR PLACING THE TRAFFIC CONTROL SIGNS.
6. COVER OPEN EXCAVATIONS WITH STEEL PLATES ANCHORED PROPERLY DURING NON-WORKING HOURS, AND OPEN LANES FOR NORMAL TRAFFIC.
7. PLACE ASPHALT PAVEMENT FOR MATCHING THE EXISTING AND PROPOSED PAVEMENT ELEVATIONS. MAXIMUM DEPTH VARIES.
8. CONTRACTOR SHALL INSTALL LOW PROFILE CONCRETE BARRIER TO REMAIN AT LOCATIONS WHERE ELEVATION DIFFERENCE BETWEEN THE DRIVING SURFACE AND WORK AREA EXCEEDS 18 INCHES.
9. INSTALL FLASHING ARROW BOARDS OPERATED BY SOLAR POWER.

PHASE 3 STEP 10

LEGEND:

- TRAILER MOUNTED FLASHING ARROW PANEL (FAP)
- SPACED @ 20' C-C (ALONG WORK ZONE & TAPERS) SPACED @ 5' C-C (AT INTERSECTIONS & ON RADII)
- WRK ZN PAV MRK 4" SOLID WHITE (REMOV)
- WRK ZN PAV MRK 4" SOLID YELLOW (REMOV)
- WRK ZN PAV MRK 24" SOLID WHITE (REMOV)
- WRK ZN PAV MRK 8" DASHED WHITE (CAT-TRACK) (REMOV)

SDPS
Houston Storm Drainage Program Support

PGAL
Professional Geotechnical Engineers

3131 BRAYFORD, SUITE 200
HOUSTON, TEXAS 77042
PHONE (713) 822-1414
FAX (713) 866-9333

iSani
CONSULTANTS
Specialty Construction Inspectors

RIDE FROM NO. F-4575
3143 YELLOWSTONE BLVD.
HOUSTON, TX 77054
TEL: (713) 747-2369
FAX: (713) 748-3748

2/24/2016

SURVEYED BY: LANDTECH
PR. NO. 87-0516

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

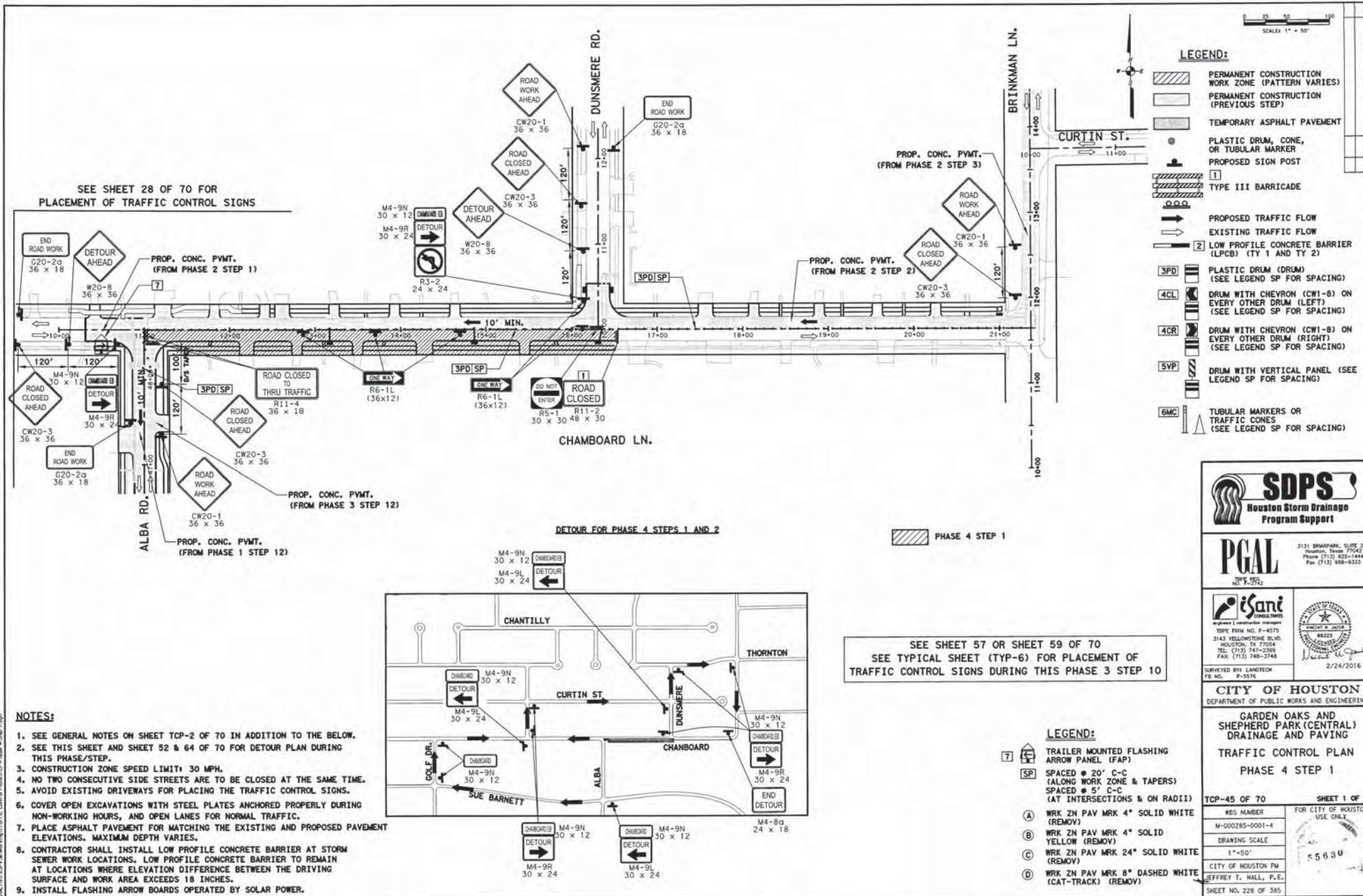
GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

TRAFFIC CONTROL PLAN

PHASE 3 STEP 10

TCP-44 OF 70		SHEET 10 OF 10
WBS NUMBER	FOR CITY OF HOUSTON USE ONLY	
M-000285-0001-4		
DRAWING SCALE		
1"=50'		
CITY OF HOUSTON PW		
JEFFREY T. HALL, P.E.		
SHEET NO. 227 OF 385		

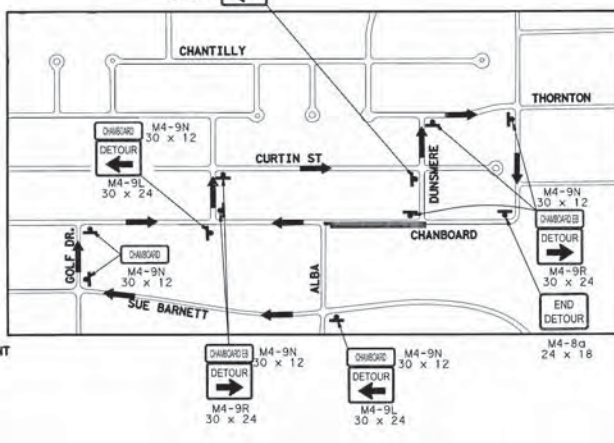
DATE: 2/24/2016
DRAWN: J. HALL
CHECKED: J. HALL
PROJECT: Garden Oaks Traffic Control Plans Phase 3 Step 10.dwg



SEE SHEET 28 OF 70 FOR
PLACEMENT OF TRAFFIC CONTROL SIGNS

- LEGEND:**
- PERMANENT CONSTRUCTION WORK ZONE (PATTERN VARIES)
 - PERMANENT CONSTRUCTION (PREVIOUS STEP)
 - TEMPORARY ASPHALT PAVEMENT
 - PLASTIC DRUM, CONE, OR TUBULAR MARKER
 - PROPOSED SIGN POST
 - TYPE III BARRICADE
 - PROPOSED TRAFFIC FLOW
 - EXISTING TRAFFIC FLOW
 - 2 LOW PROFILE CONCRETE BARRIER (LPCB) (TY 1 AND TY 2)
 - 3PD PLASTIC DRUM (DRUM) (SEE LEGEND SP FOR SPACING)
 - 4CL DRUM WITH CHEVRON (CW1-8) ON EVERY OTHER DRUM (LEFT) (SEE LEGEND SP FOR SPACING)
 - 4CR DRUM WITH CHEVRON (CW1-8) ON EVERY OTHER DRUM (RIGHT) (SEE LEGEND SP FOR SPACING)
 - 5VP DRUM WITH VERTICAL PANEL (SEE LEGEND SP FOR SPACING)
 - TUBULAR MARKERS OR TRAFFIC CONES (SEE LEGEND SP FOR SPACING)

SEE SHEET 57 OR SHEET 59 OF 70
SEE TYPICAL SHEET (TYP-6) FOR PLACEMENT OF
TRAFFIC CONTROL SIGNS DURING THIS PHASE 3 STEP 10



- NOTES:**
1. SEE GENERAL NOTES ON SHEET TCP-2 OF 70 IN ADDITION TO THE BELOW.
 2. SEE THIS SHEET AND SHEET 52 & 64 OF 70 FOR DETOUR PLAN DURING THIS PHASE/STEP.
 3. CONSTRUCTION ZONE SPEED LIMIT: 30 MPH.
 4. NO TWO CONSECUTIVE SIDE STREETS ARE TO BE CLOSED AT THE SAME TIME.
 5. AVOID EXISTING DRIVEWAYS FOR PLACING THE TRAFFIC CONTROL SIGNS.
 6. COVER OPEN EXCAVATIONS WITH STEEL PLATES ANCHORED PROPERLY DURING NON-WORKING HOURS, AND OPEN LANES FOR NORMAL TRAFFIC.
 7. PLACE ASPHALT PAVEMENT FOR MATCHING THE EXISTING AND PROPOSED PAVEMENT ELEVATIONS. MAXIMUM DEPTH VARIES.
 8. CONTRACTOR SHALL INSTALL LOW PROFILE CONCRETE BARRIER AT STORM SEWER WORK LOCATIONS. LOW PROFILE CONCRETE BARRIER TO REMAIN AT LOCATIONS WHERE ELEVATION DIFFERENCE BETWEEN THE DRIVING SURFACE AND WORK AREA EXCEEDS 18 INCHES.
 9. INSTALL FLASHING ARROW BOARDS OPERATED BY SOLAR POWER.

SDPS
Houston Storm Drainage Program Support

PGAL
3131 BAYVIEW PARK, SUITE 200
HOUSTON, TEXAS 77042
PHONE (713) 822-1414
FAX (713) 866-9333

iSani
CONSULTANTS
3143 YELLOWSTONE BLVD.
HOUSTON, TX 77054
TEL: (713) 747-2599
FAX: (713) 748-3748

SUBMITTED BY: LANTECH
P.E. NO. 2724/2016

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

TRAFFIC CONTROL PLAN

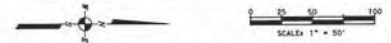
PHASE 4 STEP 1

TCP-45 OF 70 SHEET 1 OF 7

WRK ZN PAV MRK 4" SOLID WHITE (REMOV)	FOR CITY OF HOUSTON USE ONLY.
WRK ZN PAV MRK 4" SOLID YELLOW (REMOV)	
WRK ZN PAV MRK 24" SOLID WHITE (REMOV)	
WRK ZN PAV MRK 8" DASHED WHITE (CAT-TRACK) (REMOV)	

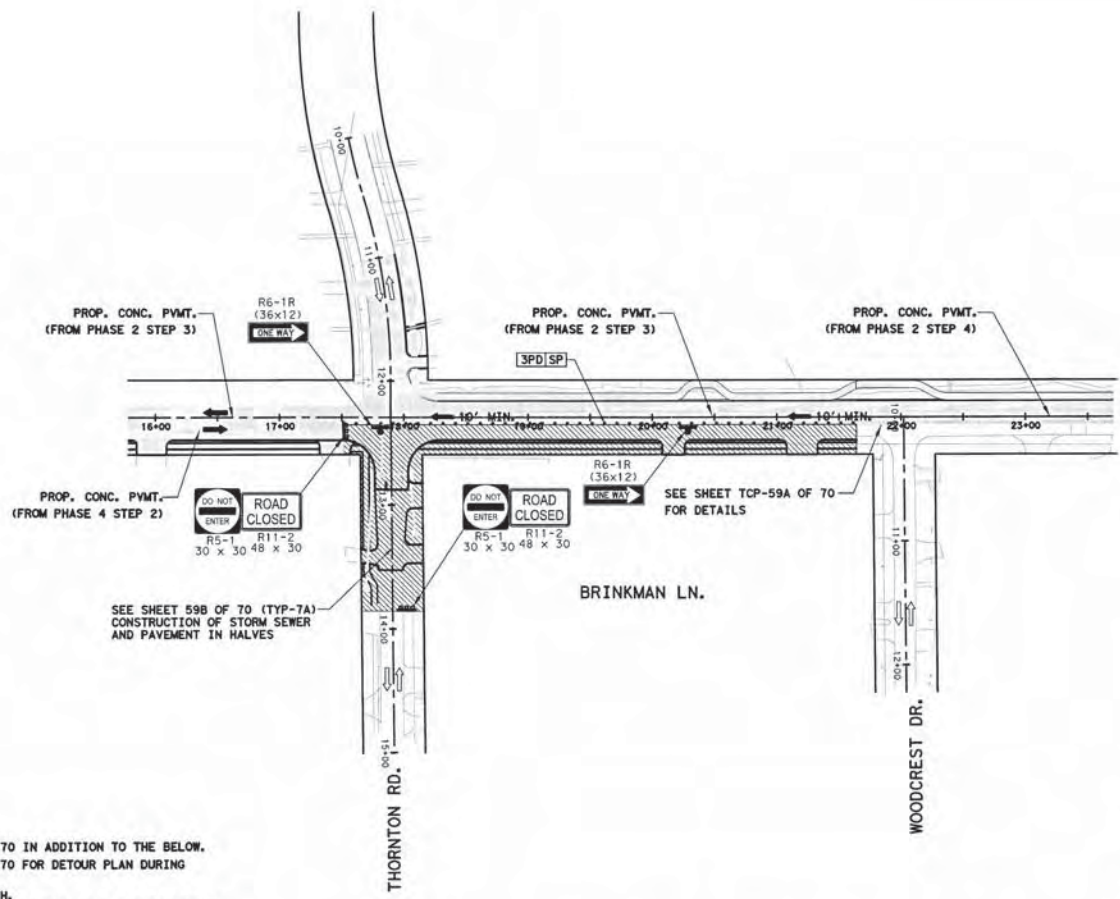
CITY OF HOUSTON PW
JEFFREY T. HALL, P.E.
SHEET NO. 228 OF 385

DATE: 2/14/2016 10:25:00 AM PROJECT: GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING - PHASE 4 STEP 1 (APP)



LEGEND:

- PERMANENT CONSTRUCTION WORK ZONE (PATTERN VARIES)
- PERMANENT CONSTRUCTION (PREVIOUS STEP)
- TEMPORARY ASPHALT PAVEMENT
- PLASTIC DRUM, CONE, OR TUBULAR MARKER
- PROPOSED SIGN POST
- [1] TYPE III BARRICADE
- PROPOSED TRAFFIC FLOW
- EXISTING TRAFFIC FLOW
- [2] LOW PROFILE CONCRETE BARRIER (LPCB) (TY 1 AND TY 2)
- [3PD] PLASTIC DRUM (DRUM) (SEE LEGEND SP FOR SPACING)
- [4CL] DRUM WITH CHEVRON (CW1-8) ON EVERY OTHER DRUM (LEFT) (SEE LEGEND SP FOR SPACING)
- [4CR] DRUM WITH CHEVRON (CW1-8) ON EVERY OTHER DRUM (RIGHT) (SEE LEGEND SP FOR SPACING)
- [5VP] DRUM WITH VERTICAL PANEL (SEE LEGEND SP FOR SPACING)
- [6MC] TUBULAR MARKERS OR TRAFFIC CONES (SEE LEGEND SP FOR SPACING)



SEE SHEET 59 OF 70
SEE TYPICAL SHEET (TYP-7A) FOR PLACEMENT OF
TRAFFIC CONTROL SIGNS DURING THIS PHASE 4 STEP 3

PHASE 4 STEP 3

LEGEND:

- [7] TRAILER MOUNTED FLASHING ARROW PANEL (FAP)
- [SP] SPACED # 20' C-C (ALONG WORK ZONE & TAPERS) SPACED # 5' C-C (AT INTERSECTIONS & ON RADII)
- [A] WRK ZN PAV MRK 4" SOLID WHITE (REMOV)
- [B] WRK ZN PAV MRK 4" SOLID YELLOW (REMOV)
- [C] WRK ZN PAV MRK 24" SOLID WHITE (REMOV)
- [D] WRK ZN PAV MRK 8" DASHED WHITE (CAT-TRACK) (REMOV)

SDPS
Houston Storm Drainage Program Support

PGAL
TYPE III BARRICADE
NO. F-292

3131 SHEPHERD PARK, SUITE 200
HOUSTON, TEXAS 77042
PHONE: (713) 622-1444
FAX: (713) 668-9333

iSani
CONSULTANTS
TYPE FIRM NO. F-4575
3143 YELLOWSTONE BLVD.
HOUSTON, TX 77054
TEL: (713) 747-2399
FAX: (713) 748-3748

SEAL
MAY 11 2016
MAY 11 2016
2/24/2016

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

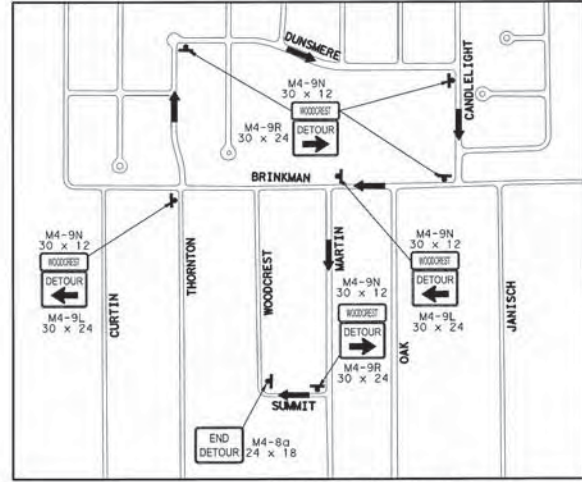
GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING TRAFFIC CONTROL PLAN PHASE 4 STEP 3

TCP-47 OF 70		SHEET 3 OF 7	
WBS NUMBER	M-000285-0001-4	FOR CITY OF HOUSTON USE ONLY	
DRAWING SCALE	1"=50'	5 5 3 U	
CITY OF HOUSTON PM		JEFFREY T. MALL, P.E.	
SHEET NO. 230 OF 385			

Garden Oaks_Traffic Control Plans_001_Summit

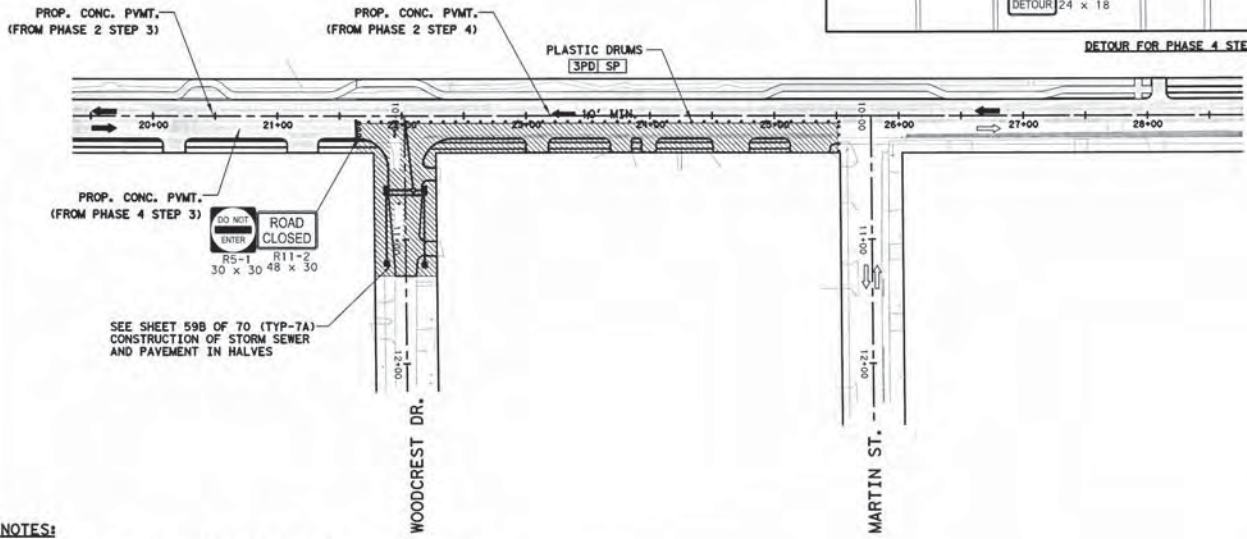
- NOTES:**
1. SEE GENERAL NOTES ON SHEET TCP-2 OF 70 IN ADDITION TO THE BELOW.
 2. SEE THIS SHEET AND SHEET 52 & 64 OF 70 FOR DETOUR PLAN DURING THIS PHASE/STEP.
 3. CONSTRUCTION ZONE SPEED LIMIT 30 MPH.
 4. NO TWO CONSECUTIVE SIDE STREETS ARE TO BE CLOSED AT THE SAME TIME.
 5. AVOID EXISTING DRIVEWAYS FOR PLACING THE TRAFFIC CONTROL SIGNS.
 6. COVER OPEN EXCAVATIONS WITH STEEL PLATES ANCHORED PROPERLY DURING NON-WORKING HOURS, AND OPEN LANES FOR NORMAL TRAFFIC.
 7. PLACE ASPHALT PAVEMENT FOR MATCHING THE EXISTING AND PROPOSED PAVEMENT ELEVATIONS. MAXIMUM DEPTH VARIES.
 8. CONTRACTOR SHALL INSTALL LOW PROFILE CONCRETE BARRIER AT STORM SEWER WORK LOCATIONS. LOW PROFILE CONCRETE BARRIER TO REMAIN AT LOCATIONS WHERE ELEVATION DIFFERENCE BETWEEN THE DRIVING SURFACE AND WORK AREA EXCEEDS 18 INCHES.
 9. INSTALL FLASHING ARROW BOARDS OPERATED BY SOLAR POWER.

DATE: 5/24/2016 9:43:27 AM
PROJECT: C:\Users\jgibson\OneDrive\Traffic Control Plans\TCP-Phase 4-Step 3.dwg



LEGEND:

- PERMANENT CONSTRUCTION WORK ZONE (PATTERN VARIES)
- PERMANENT CONSTRUCTION (PREVIOUS STEP)
- TEMPORARY ASPHALT PAVEMENT
- PLASTIC DRUM, CONE, OR TUBULAR MARKER
- PROPOSED SIGN POST
- TYPE III BARRICADE
- O.O.P.
- PROPOSED TRAFFIC FLOW
- EXISTING TRAFFIC FLOW
- LOW PROFILE CONCRETE BARRIER (LPCB) (TY 1 AND TY 2)
- PLASTIC DRUM (DRUM) (SEE LEGEND SP FOR SPACING)
- DRUM WITH CHEVRON (CW1-B) ON EVERY OTHER DRUM (LEFT) (SEE LEGEND SP FOR SPACING)
- DRUM WITH CHEVRON (CW1-B) ON EVERY OTHER DRUM (RIGHT) (SEE LEGEND SP FOR SPACING)
- DRUM WITH VERTICAL PANEL (SEE LEGEND SP FOR SPACING)
- TUBULAR MARKERS OR TRAFFIC CONES (SEE LEGEND SP FOR SPACING)



SEE SHEET 59B OF 70 (TYP-TA) CONSTRUCTION OF STORM SEWER AND PAVEMENT IN HALVES

SEE SHEET 57 OR 59 OF 70 SEE TYPICAL SHEET (TYP-4 OR TYP-6) FOR PLACEMENT OF TRAFFIC CONTROL SIGNS DURING THIS PHASE 4 STEP 4

NOTES:

1. SEE GENERAL NOTES ON SHEET TCP-2 OF 70 IN ADDITION TO THE BELOW.
2. SEE THIS SHEET AND SHEET 52 & 64 OF 70 FOR DETOUR PLAN DURING THIS PHASE/STEP.
3. CONSTRUCTION ZONE SPEED LIMIT: 30 MPH.
4. NO TWO CONSECUTIVE SIDE STREETS ARE TO BE CLOSED AT THE SAME TIME.
5. AVOID EXISTING DRIVEWAYS FOR PLACING THE TRAFFIC CONTROL SIGNS.
6. COVER OPEN EXCAVATIONS WITH STEEL PLATES ANCHORED PROPERLY DURING NON-WORKING HOURS, AND OPEN LANES FOR NORMAL TRAFFIC.
7. PLACE ASPHALT PAVEMENT FOR MATCHING THE EXISTING AND PROPOSED PAVEMENT ELEVATIONS. MAXIMUM DEPTH VARIES.
8. CONTRACTOR SHALL INSTALL LOW PROFILE CONCRETE BARRIER AT STORM SEWER WORK LOCATIONS. LOW PROFILE CONCRETE BARRIER TO REMAIN AT LOCATIONS WHERE ELEVATION DIFFERENCE BETWEEN THE DRIVING SURFACE AND WORK AREA EXCEEDS 18 INCHES.
9. INSTALL FLASHING ARROW BOARDS OPERATED BY SOLAR POWER.

PHASE 4 STEP 4

LEGEND:

- TRAILER MOUNTED FLASHING ARROW PANEL (FAP)
- SPACED @ 20' C-C (ALONG WORK ZONE & TAPERS) SPACED @ 5' C-C (AT INTERSECTIONS & ON RADII)
- WRK ZN PAV MKR 4" SOLID WHITE (REMOV)
- WRK ZN PAV MKR 4" SOLID YELLOW (REMOV)
- WRK ZN PAV MKR 24" SOLID WHITE (REMOV)
- WRK ZN PAV MKR 8" DASHED WHITE (CAT-TRACK) (REMOV)

SDPS
Houston Storm Drainage Program Support

PGAL
TYPE REC NO. F-392

3131 BRAWPARK, SUITE 200
Houston, Texas 77042
Phone: (713) 622-1444
Fax: (713) 958-0333

iSani
CONSTRUCTION MANAGEMENT
TYPE FIRM NO. F-4575
3145 YELLOWSTONE BLVD.
HOUSTON, TX 77024
TEL: (713) 747-2399
FAX: (713) 748-3748

SURVEYED BY: LANSTECH
FR NO. P-5576
2/24/2016

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING TRAFFIC CONTROL PLAN PHASE 4 STEP 4

TCP-48 OF 70 SHEET 4 OF 7

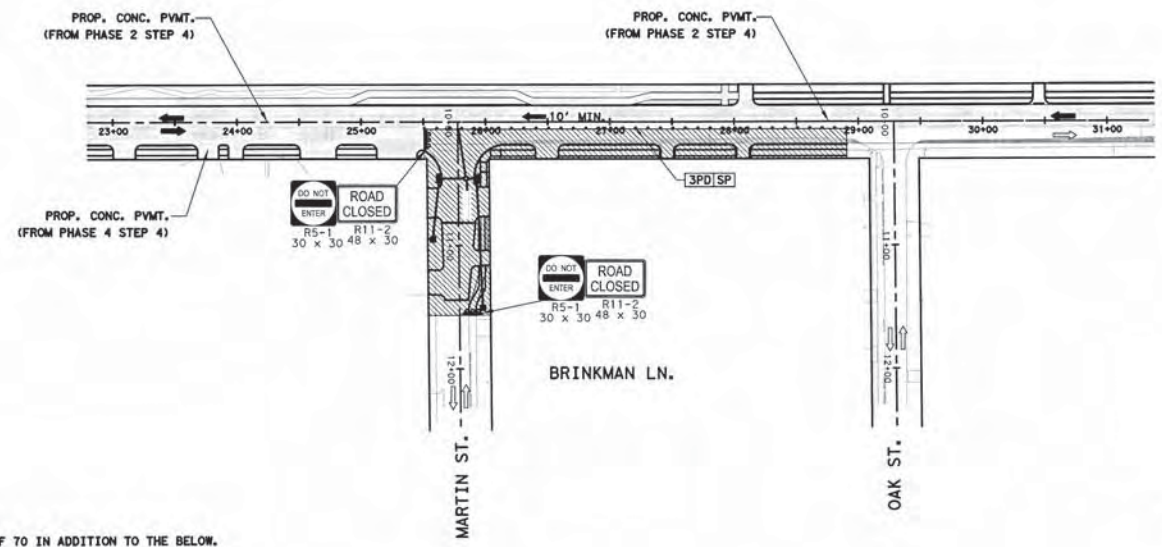
WBS NUMBER M-000285-0001-4	FOR CITY OF HOUSTON USE ONLY
DRAWING SCALE 1"=50'	5630
CITY OF HOUSTON PM JEFFREY T. HALL, P.E. SHEET NO. 231 OF 385	

DATE: 2/24/2016 9:40:35 AM P:\ACTV\CLM\9500\Area\Area\Traffic Control Plans\TCP-Phase 4-Sheet 4.dwg



LEGEND:

- PERMANENT CONSTRUCTION WORK ZONE (PATTERN VARIES)
- PERMANENT CONSTRUCTION (PREVIOUS STEP)
- TEMPORARY ASPHALT PAVEMENT
- PLASTIC DRUM, CONE, OR TUBULAR MARKER
- PROPOSED SIGN POST
- TYPE III BARRICADE
- PROPOSED TRAFFIC FLOW
- EXISTING TRAFFIC FLOW
- LOW PROFILE CONCRETE BARRIER (LPCB) (TY 1 AND TY 2)
- PLASTIC DRUM (DRUM) (SEE LEGEND SP FOR SPACING)
- DRUM WITH CHEVRON (CW1-B) ON EVERY OTHER DRUM (LEFT) (SEE LEGEND SP FOR SPACING)
- DRUM WITH CHEVRON (CW1-B) ON EVERY OTHER DRUM (RIGHT) (SEE LEGEND SP FOR SPACING)
- DRUM WITH VERTICAL PANEL (SEE LEGEND SP FOR SPACING)
- TUBULAR MARKERS OR TRAFFIC CONES (SEE LEGEND SP FOR SPACING)



NOTES:

1. SEE GENERAL NOTES ON SHEET TCP-2 OF 70 IN ADDITION TO THE BELOW.
2. SEE THIS SHEET AND SHEET 52 & 64 OF 70 FOR DETOUR PLAN DURING THIS PHASE/STEP.
3. CONSTRUCTION ZONE SPEED LIMIT: 30 MPH.
4. NO TWO CONSECUTIVE SIDE STREETS ARE TO BE CLOSED AT THE SAME TIME.
5. AVOID EXISTING DRIVENWAYS FOR PLACING THE TRAFFIC CONTROL SIGNS.
6. COVER OPEN EXCAVATIONS WITH STEEL PLATES ANCHORED PROPERLY DURING NON-WORKING HOURS, AND OPEN LANES FOR NORMAL TRAFFIC.
7. PLACE ASPHALT PAVEMENT FOR MATCHING THE EXISTING AND PROPOSED PAVEMENT ELEVATIONS. MAXIMUM DEPTH VARIES.
8. CONTRACTOR SHALL INSTALL LOW PROFILE CONCRETE BARRIER AT STORM SEWER WORK LOCATIONS. LOW PROFILE CONCRETE BARRIER TO REMAIN AT LOCATIONS WHERE ELEVATION DIFFERENCE BETWEEN THE DRIVING SURFACE AND WORK AREA EXCEEDS 18 INCHES.
9. INSTALL FLASHING ARROW BOARDS OPERATED BY SOLAR POWER.

SEE SHEET 57 OR 59 OF 70
SEE TYPICAL SHEET (TYP-4 OR TYP-6) FOR PLACEMENT OF TRAFFIC CONTROL SIGNS DURING THIS PHASE 4 STEP 5

PHASE 4 STEP 5

LEGEND:

- TRAILER MOUNTED FLASHING ARROW PANEL (FAP)
- SPACED @ 20' C-C (ALONG WORK ZONE & TAPERS) SPACED @ 5' C-C (AT INTERSECTIONS & ON RADII)
- WRK ZN PAV MRK 4" SOLID WHITE (REMOV)
- WRK ZN PAV MRK 4" SOLID YELLOW (REMOV)
- WRK ZN PAV MRK 24" SOLID WHITE (REMOV)
- WRK ZN PAV MRK 8" DASHED WHITE (CAT-TRACK) (REMOV)

SDPS
Houston Storm Drainage Program Support

PGAL
3131 BRAYBARK, SUITE 200
HOUSTON, TEXAS 77064
Phone (713) 622-1444
Fax (713) 668-9333

iSani CONSULTANTS
Storm & Sanitary Engineering
3143 YELLOWSTONE BLVD.
HOUSTON, TX 77054
TEL: (713) 747-2399
FAX: (713) 746-3748
SURVEYED BY: LANDTECH
F# NO. 2-0076

2/24/2016

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING TRAFFIC CONTROL PLAN PHASE 4 STEP 5

TCP-49 OF 70 SHEET 5 OF 7

WBS NUMBER M-000285-0001-4 FOR CITY OF HOUSTON USE ONLY

DRAWING SCALE 1"=50'

CITY OF HOUSTON PM JEFFREY T. HALL, P.E.

SHEET NO. 232 OF 385

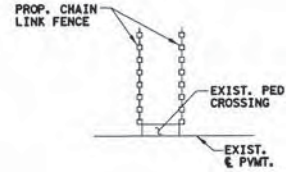
55630

DATE: 2/24/2016 9:40:20 AM
PROJECT: SDPS/Storm Drainage/Traffic Control Plans/TCP-Phase 4/Step 5.dwg

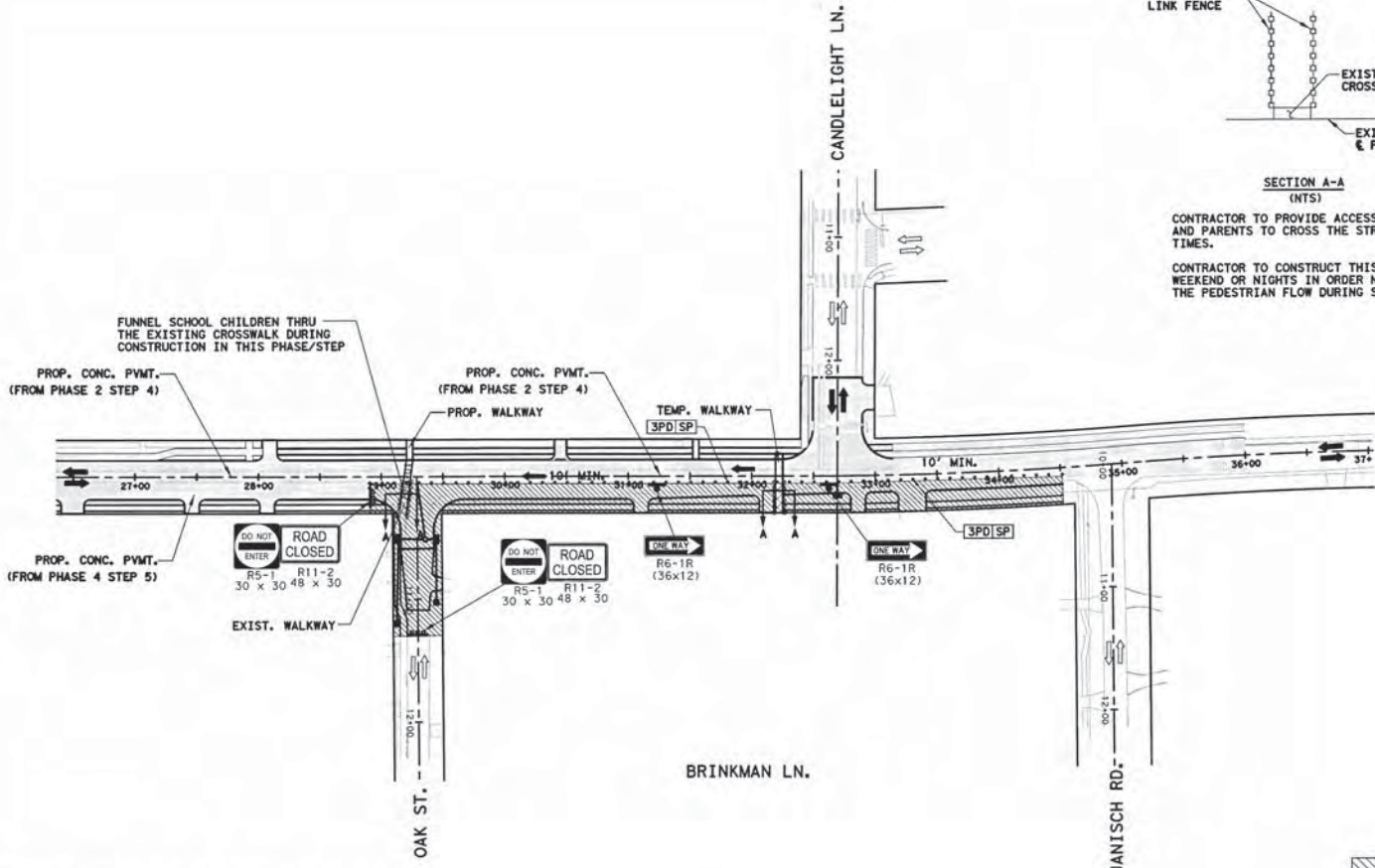


LEGEND:

- PERMANENT CONSTRUCTION WORK ZONE (PATTERN VARIES)
- PERMANENT CONSTRUCTION (PREVIOUS STEP)
- TEMPORARY ASPHALT PAVEMENT
- PLASTIC DRUM, CONE, OR TUBULAR MARKER
- PROPOSED SIGN POST
- [1] TYPE III BARRICADE
- PROPOSED TRAFFIC FLOW
- EXISTING TRAFFIC FLOW
- [2] LOW PROFILE CONCRETE BARRIER (LPCB) (TY 1 AND TY 2)
- [3PD] PLASTIC DRUM (DRUM) (SEE LEGEND SP FOR SPACING)
- [4CL] DRUM WITH CHEVRON (CW1-B) ON EVERY OTHER DRUM (LEFT) (SEE LEGEND SP FOR SPACING)
- [4CR] DRUM WITH CHEVRON (CW1-B) ON EVERY OTHER DRUM (RIGHT) (SEE LEGEND SP FOR SPACING)
- [5VP] DRUM WITH VERTICAL PANEL (SEE LEGEND SP FOR SPACING)
- [GMC] TUBULAR MARKERS OR TRAFFIC CONES (SEE LEGEND SP FOR SPACING)



SECTION A-A (NTS)
 CONTRACTOR TO PROVIDE ACCESS FOR CHILDREN AND PARENTS TO CROSS THE STREET AT ALL TIMES.
 CONTRACTOR TO CONSTRUCT THIS SECTION DURING WEEKEND OR NIGHTS IN ORDER NOT TO OBSTRUCT THE PEDESTRIAN FLOW DURING SCHOOL TIMES.



BRINKMAN LN.

OAK ST.

JANITSCH RD.

CANDLELIGHT LN.

- NOTES:**
1. SEE GENERAL NOTES ON SHEET TCP-2 OF 70 IN ADDITION TO THE BELOW.
 2. SEE THIS SHEET AND SHEET 52 & 64 OF 70 FOR DETOUR PLAN DURING THIS PHASE/STEP.
 3. CONSTRUCTION ZONE SPEED LIMIT: 30 MPH.
 4. NO TWO CONSECUTIVE SIDE STREETS ARE TO BE CLOSED AT THE SAME TIME.
 5. AVOID EXISTING DRIVEWAYS FOR PLACING THE TRAFFIC CONTROL SIGNS.
 6. COVER OPEN EXCAVATIONS WITH STEEL PLATES ANCHORED PROPERLY DURING NON-WORKING HOURS, AND OPEN LANES FOR NORMAL TRAFFIC.
 7. PLACE ASPHALT PAVEMENT FOR MATCHING THE EXISTING AND PROPOSED PAVEMENT ELEVATIONS. MAXIMUM DEPTH VARIES.
 8. CONTRACTOR SHALL INSTALL LOW PROFILE CONCRETE BARRIER AT STORM SEWER WORK LOCATIONS. LOW PROFILE CONCRETE BARRIER TO REMAIN AT LOCATIONS WHERE ELEVATION DIFFERENCE BETWEEN THE DRIVING SURFACE AND WORK AREA EXCEEDS 18 INCHES.
 9. INSTALL FLASHING ARROW BOARDS OPERATED BY SOLAR POWER.

SEE SHEET 59 OF 70
 SEE TYPICAL SHEET (TYP-6) FOR PLACEMENT OF TRAFFIC CONTROL SIGNS DURING THIS PHASE 4 STEP 6

PHASE 4 STEP 6

LEGEND:

- [7] TRAILER MOUNTED FLASHING ARROW PANEL (FAP)
- [SP] SPACED @ 20' C-C (ALONG WORK ZONE & TAPERS)
 SPACED @ 5' C-C (AT INTERSECTIONS & ON RADII)
- [A] WRK ZN PAV MRK 4" SOLID WHITE (REMOV)
- [B] WRK ZN PAV MRK 4" SOLID YELLOW (REMOV)
- [C] WRK ZN PAV MRK 24" SOLID WHITE (REMOV)
- [D] WRK ZN PAV MRK 8" DASHED WHITE (CAT-TRACK) (REMOV)

SDPS
Houston Storm Drainage Program Support

3130 BRIMMERS, SUITE 305
Houston, Texas 77042
Phone: (713) 852-1444
Fax: (713) 958-3533

PGAL
Professional Geotechnical Associates, L.P.

3143 YELLOWSTONE BLVD.
HOUSTON, TX 77004
TEL: (713) 747-2399
FAX: (713) 748-3748

SURVEYED BY: LANDTECH
FD NO. #5276

2/24/2016

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING
TRAFFIC CONTROL PLAN
PHASE 4 STEP 6

TCP-50 OF 70 SHEET 6 OF 7

WBS NUMBER M-000285-0001-4	FOR CITY OF HOUSTON USE ONLY
DRAWING SCALE 1"=50'	5630
CITY OF HOUSTON, TX JEFFREY T. HALL, P.E. SHEET NO. 233 OF 385	

DATE: 2/24/2016
 DRAWN BY: JEFFREY T. HALL, P.E.
 CHECKED BY: JEFFREY T. HALL, P.E.
 SCALE: 1" = 50'



LEGEND:

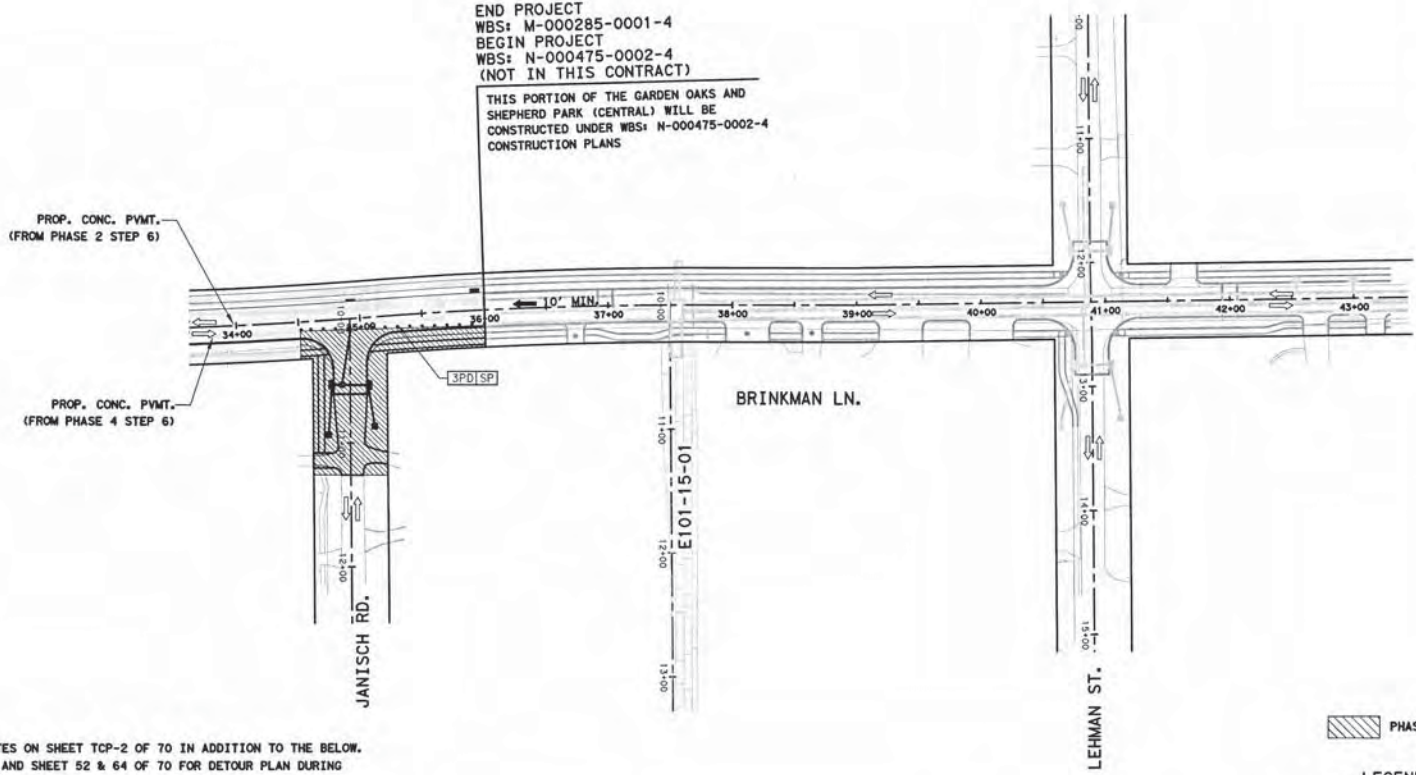
- PERMANENT CONSTRUCTION WORK ZONE (PATTERN VARIES)
- PERMANENT CONSTRUCTION (PREVIOUS STEP)
- TEMPORARY ASPHALT PAVEMENT
- PLASTIC DRUM, CONE, OR TUBULAR MARKER
- PROPOSED SIGN POST
- TYPE III BARRICADE
- PROPOSED TRAFFIC FLOW
- EXISTING TRAFFIC FLOW
- [1] LOW PROFILE CONCRETE BARRIER (LPCB) (TY 1 AND TY 2)
- [3PD] PLASTIC DRUM (DRUM) (SEE LEGEND SP FOR SPACING)
- [4CL] DRUM WITH CHEVRON (CW1-8) ON EVERY OTHER DRUM (LEFT) (SEE LEGEND SP FOR SPACING)
- [4CR] DRUM WITH CHEVRON (CW1-8) ON EVERY OTHER DRUM (RIGHT) (SEE LEGEND SP FOR SPACING)
- [5VP] DRUM WITH VERTICAL PANEL (SEE LEGEND SP FOR SPACING)
- [GMC] TUBULAR MARKERS OR TRAFFIC CONES (SEE LEGEND SP FOR SPACING)

END PROJECT
 WBS: M-000285-0001-4
 BEGIN PROJECT
 WBS: N-000475-0002-4
 (NOT IN THIS CONTRACT)

THIS PORTION OF THE GARDEN OAKS AND SHEPHERD PARK (CENTRAL) WILL BE CONSTRUCTED UNDER WBS: N-000475-0002-4 CONSTRUCTION PLANS

PROP. CONC. PVMT.
 (FROM PHASE 2 STEP 6)

PROP. CONC. PVMT.
 (FROM PHASE 4 STEP 6)



BRINKMAN LN.

JANISCH RD.

LEHMAN ST.

E101-15-01

NOTES:

1. SEE GENERAL NOTES ON SHEET TCP-2 OF 70 IN ADDITION TO THE BELOW.
2. SEE THIS SHEET AND SHEET 52 & 64 OF 70 FOR DETOUR PLAN DURING THIS PHASE/STEP.
3. CONSTRUCTION ZONE SPEED LIMIT: 30 MPH.
4. NO TWO CONSECUTIVE SIDE STREETS ARE TO BE CLOSED AT THE SAME TIME.
5. AVOID EXISTING DRIVEWAYS FOR PLACING THE TRAFFIC CONTROL SIGNS.
6. COVER OPEN EXCAVATIONS WITH STEEL PLATES ANCHORED PROPERLY DURING NON-WORKING HOURS, AND OPEN LANES FOR NORMAL TRAFFIC.
7. PLACE ASPHALT PAVEMENT FOR MATCHING THE EXISTING AND PROPOSED PAVEMENT ELEVATIONS. MAXIMUM DEPTH VARIES.
8. CONTRACTOR SHALL INSTALL LOW PROFILE CONCRETE BARRIER AT STORM SEWER WORK LOCATIONS. LOW PROFILE CONCRETE BARRIER TO REMAIN AT LOCATIONS WHERE ELEVATION DIFFERENCE BETWEEN THE DRIVING SURFACE AND WORK AREA EXCEEDS 18 INCHES.
9. INSTALL FLASHING ARROW BOARDS OPERATED BY SOLAR POWER.

SEE SHEET 57 OR 59 OF 70
 SEE TYPICAL SHEET (TYP-4 OR TYP-6) FOR PLACEMENT OF TRAFFIC CONTROL SIGNS DURING THIS PHASE 4 STEP 7

PHASE 4 STEP 7

LEGEND:

- [T] TRAILER MOUNTED FLASHING ARROW PANEL (FAP)
- [SP] SPACED @ 20' C-C (ALONG WORK ZONE & TAPERS)
 SPACED @ 5' C-C (AT INTERSECTIONS & ON RADII)
- (A) WRK ZN PAV MRK 4" SOLID WHITE (REMOV)
- (B) WRK ZN PAV MRK 4" SOLID YELLOW (REMOV)
- (C) WRK ZN PAV MRK 24" SOLID WHITE (REMOV)
- (D) WRK ZN PAV MRK 8" DASHED WHITE (CAT-TRACK) (REMOV)

SDPS
Houston Storm Drainage Program Support

3131 BRIMMORR, SUITE 205
Houston, Texas 77042
Phone: (713) 822-1444
Fax: (713) 668-9333

PGAL
TYPE NO. 101
NO. P-292

3143 YELLOWSTONE BLVD.
HOUSTON, TX 77054
TEL: (713) 747-2399
FAX: (713) 748-3748

Isani CONSULTANTS
ISPE FIRM NO. F-4575
3143 YELLOWSTONE BLVD.
HOUSTON, TX 77054
TEL: (713) 747-2399
FAX: (713) 748-3748

SUPERVISED BY: LANDTECH
FD NO. # 9576

2/24/2016

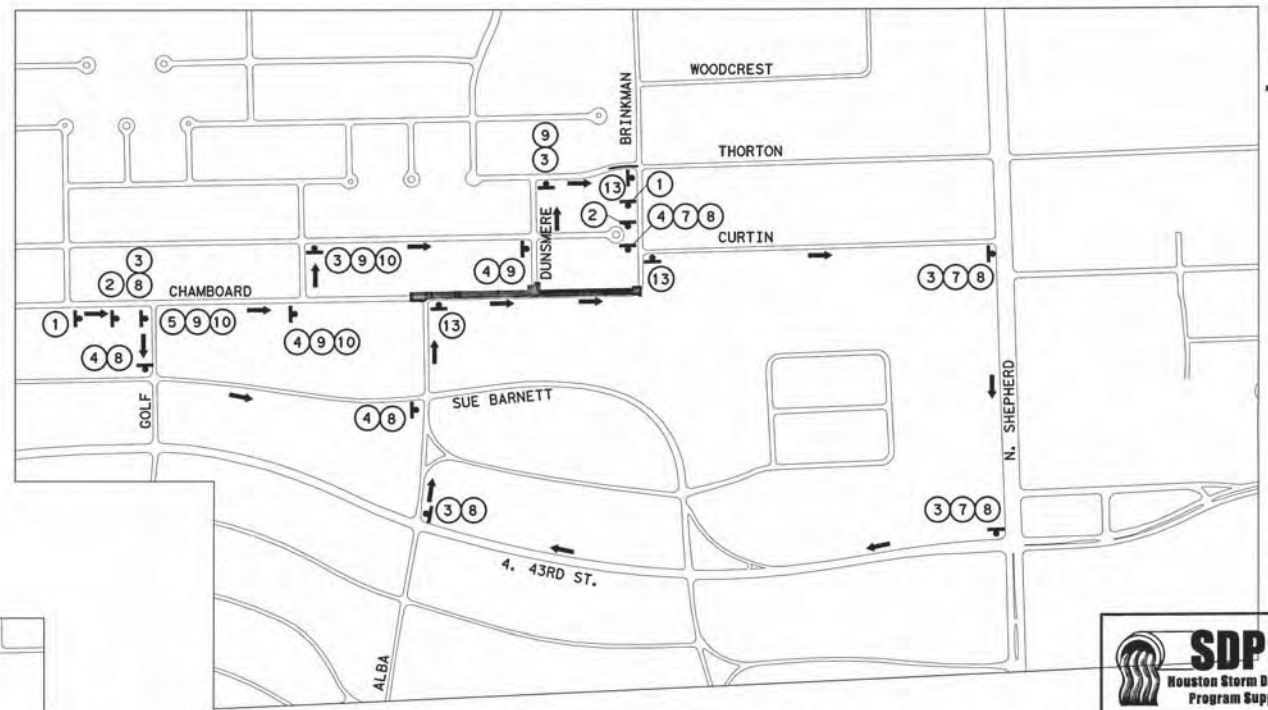
CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING
TRAFFIC CONTROL PLAN
PHASE 4 STEP 7

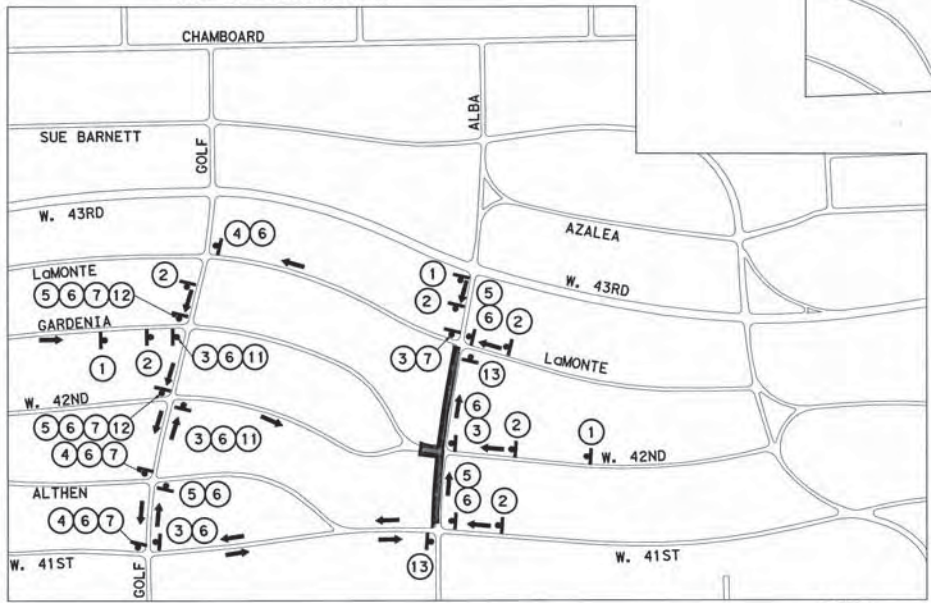
TCP-51 OF 70 SHEET 7 OF 7

WBS NUMBER M-000285-0001-4	FOR CITY OF HOUSTON USE ONLY.
DRAWING SCALE 1"=50'	5 5 6 3 0
CITY OF HOUSTON PW JEFFREY T. HALL, P.E. SHEET NO. 234 OF 385	

DATE: 2/24/2016 9:06:41 AM
 PROJECT: SDPS Storm Drainage Traffic Control Plans TCP-Phase 4-Step 7.dgn

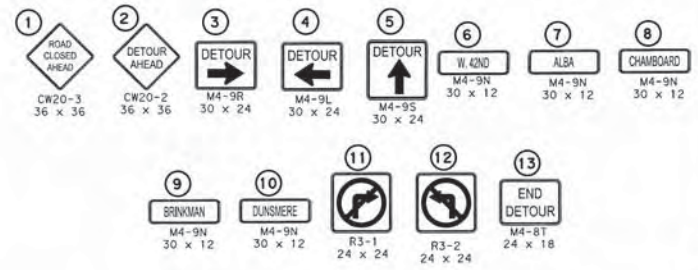


TYPICAL DETOUR FOR ALBA ROAD WITH ONE LANE ROADWAY



TYPICAL DETOUR FOR CHAMBOARD LANE WITH ONE LANE ROADWAY

PHASE 2 STEPS 1&2



- NOTE:**
1. TYPICAL SPACING OF SIGNS = 120' (FOR 30 MPH)
 2. TYPICAL SPACING OF SIGNS = 160' (FOR 35 MPH)



SDPS
Houston Storm Drainage
Program Support



PGAL
Professional Geotechnical Associates, L.P.
3131 BIRCHPARK, SUITE 200
HOUSTON, TEXAS 77042
PHONE (713) 622-1844
FAX (713) 958-9333



iSan
CONSTRUCTION SIGNS
TRAFFIC CONTROL SIGNS
TRAFFIC CONTROL SIGNS
TRAFFIC CONTROL SIGNS
3143 YELLOWSTONE BLVD.
HOUSTON, TX 77004
TEL: (713) 747-2399
FAX: (713) 748-3746



2/24/2016

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

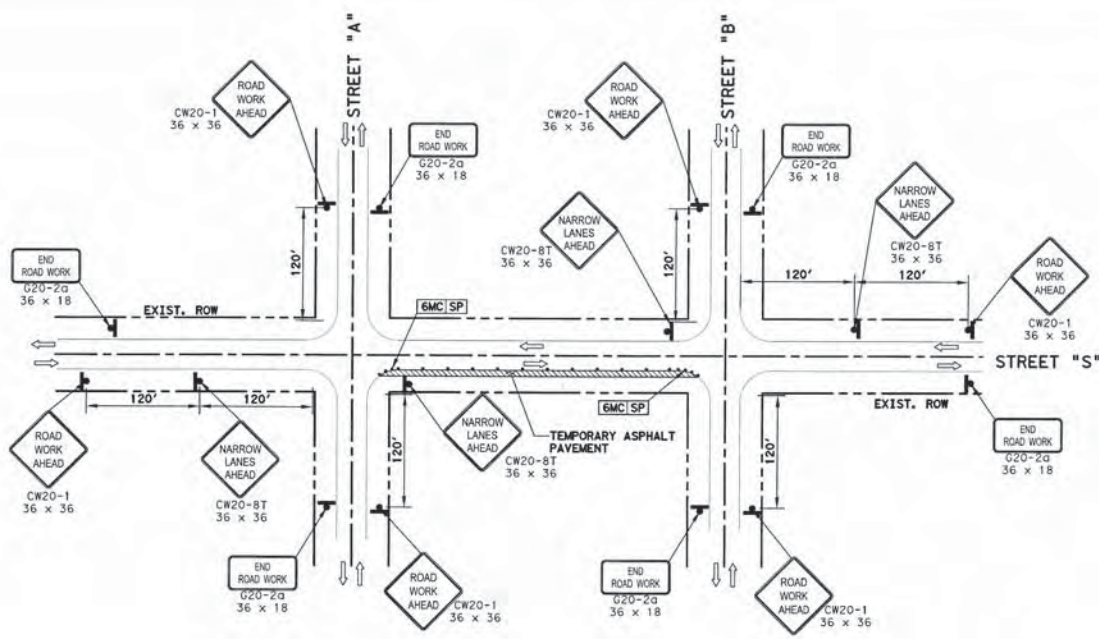
GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

DETOUR PLAN
TYPICAL DETOURS
ALONG ALBA (TYP DET-1)
ALONG CHAMBOARD (TYP DET-2)

TCP-52 OF 70 SHEET 1 OF 2

WBS NUMBER	FOR CITY OF HOUSTON USE ONLY
M-000285-0001-4	
DRAWING SCALE	
1"=300'	
CITY OF HOUSTON PM	
JEFFREY T. HALL, P.E.	
SHEET NO. 235 OF 385	

DATE: 2/24/2016 9:43:37 AM
 PROJECT: SDPS - Garden Oaks Traffic Control Signs



LEGEND:

- PERMANENT CONSTRUCTION WORK ZONE (PATTERN VARIES)
- PERMANENT CONSTRUCTION (PREVIOUS STEP)
- TEMPORARY ASPHALT PAVEMENT
- PLASTIC DRUM, CONE, OR TUBULAR MARKER
- PROPOSED SIGN POST
- [1] TYPE III BARRICADE
- PROPOSED TRAFFIC FLOW
- EXISTING TRAFFIC FLOW
- [2] LOW PROFILE CONCRETE BARRIER (LPCB) (TY 1 AND TY 2)
- [3PD] PLASTIC DRUM (DRUM) (SEE LEGEND SP FOR SPACING)
- [4CL] DRUM WITH CHEVRON (CW-1) ON EVERY OTHER DRUM (LEFT) (SEE LEGEND SP FOR SPACING)
- [4CR] DRUM WITH CHEVRON (CW-1) ON EVERY OTHER DRUM (RIGHT) (SEE LEGEND SP FOR SPACING)
- [5VP] DRUM WITH VERTICAL PANEL (SEE LEGEND SP FOR SPACING)
- [GMC] TUBULAR MARKERS OR TRAFFIC CONES (SEE LEGEND SP FOR SPACING)

ALBA RD./BRINKMAN LN.

TYPICAL TRAFFIC CONTROL PLAN FOR TEMPORARY PAVEMENT CONSTRUCTION ALONG ALBA AND BRINKMAN

APPLICABLE STREETS FOR TYP-1

PHASE/STEP	STREET A	STREET B	STREET S
PHASE 1 STEP 1	WAKEFIELD DRIVE	FISHER DRIVE	ALBA ROAD
PHASE 1 STEP 1	FISHER DRIVE	W. 41ST STREET	ALBA ROAD
PHASE 1 STEP 4A	W. 41ST STREET	W. 42ND STREET	ALBA ROAD
PHASE 1 STEP 7A	W. 42ND STREET	LAMONTE LANE	ALBA ROAD
PHASE 1 STEP 8A	LAMONTE LANE	W. 43RD STREET	ALBA ROAD
PHASE 1 STEP 10C	W. 43RD STREET	CHAMBOARD LANE	ALBA ROAD

APPLICABLE STREETS FOR TYP-1

PHASE/STEP	STREET A	STREET B	STREET S
PHASE 2 STEP 1A	CHAMBOARD LANE	THORNTON ROAD	BRINKMAN LANE
PHASE 2 STEP 2A	THORNTON ROAD	WOODCREST DRIVE	BRINKMAN LANE
PHASE 2 STEP 3A	WOODCREST DRIVE	MARTIN STREET	BRINKMAN LANE
PHASE 2 STEP 3A	MARTIN STREET	OAK STREET	BRINKMAN LANE
PHASE 2 STEP 3A	OAK STREET	JANISCH ROAD	BRINKMAN LANE
PHASE 2 STEP 5C	JANISCH ROAD	LEHMAN STREET	BRINKMAN LANE

LEGEND:

- [T] TRAILER MOUNTED FLASHING ARROW PANEL (FAP)
- [SP] SPACED @ 20' C-C (ALONG WORK ZONE & TAPERS) SPACED @ 5' C-C (AT INTERSECTIONS & ON RADII)
- [A] WRK ZN PAV MRK 4" SOLID WHITE (REMOV)
- [B] WRK ZN PAV MRK 4" SOLID YELLOW (REMOV)
- [C] WRK ZN PAV MRK 24" SOLID WHITE (REMOV)
- [D] WRK ZN PAV MRK 8" DASHED WHITE (CAT-TRACK) (REMOV)

SDPS
Houston Storm Drainage Program Support

PGAL
3131 BRANPARK, SUITE 200
HOUSTON, TEXAS 77042
Phone (713) 632-1444
Fax (713) 955-9333

iSant
CONSULTING
3143 YELLOWSTONE BLVD.
HOUSTON, TX 77054
TEL: (713) 748-2368
FAX: (713) 748-3748

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

TRAFFIC CONTROL PLAN
TYPICAL TEMPORARY PAVEMENT CONSTRUCTION (TYP-1)

TCP-54 OF 70 SHEET 1 OF 8

WBS NUMBER: M-000285-0001-4
DRAWING SCALE: 1"=50'
CITY OF HOUSTON PM: JEFFREY T. HALL, P.E.
SHEET NO. 237 OF 385

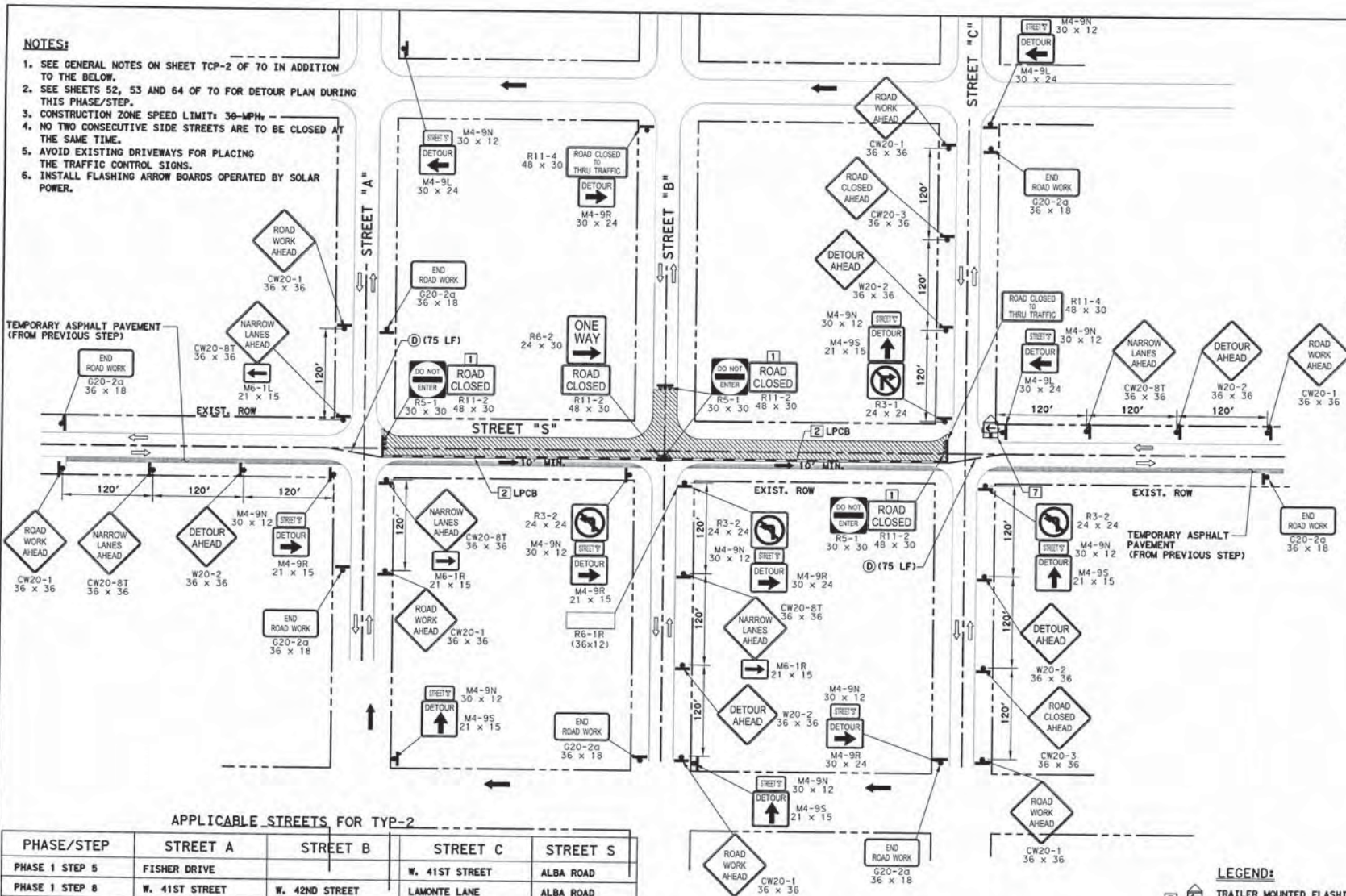
55630

DATE: 2/24/2016 9:40:43 AM PROJECT: C:\Users\jhall\Documents\2016\20160201\Traffic Control Plans\Typ-1\Traffic Control Plans\Typ-1.dwg

- NOTES:**
1. SEE GENERAL NOTES ON SHEET TCP-2 OF 70 IN ADDITION TO THE BELOW.
 2. SEE SHEETS 52, 53 AND 64 OF 70 FOR DETOUR PLAN DURING THIS PHASE/STEP.
 3. CONSTRUCTION ZONE SPEED LIMITS 30-MPH.
 4. NO TWO CONSECUTIVE SIDE STREETS ARE TO BE CLOSED AT THE SAME TIME.
 5. AVOID EXISTING DRIVEWAYS FOR PLACING THE TRAFFIC CONTROL SIGNS.
 6. INSTALL FLASHING ARROW BOARDS OPERATED BY SOLAR POWER.



- LEGEND:**
- PERMANENT CONSTRUCTION WORK ZONE (PATTERN VARIES)
 - PERMANENT CONSTRUCTION (PREVIOUS STEP)
 - TEMPORARY ASPHALT PAVEMENT
 - PLASTIC DRUM, CONE, OR TUBULAR MARKER
 - PROPOSED SIGN POST
 - TYPE III BARRICADE
 - PROPOSED TRAFFIC FLOW
 - EXISTING TRAFFIC FLOW
 - LOW PROFILE CONCRETE BARRIER (LPCB) (TY 1 AND TY 2)
 - PLASTIC DRUM (DRUM) (SEE LEGEND SP FOR SPACING)
 - DRUM WITH CHEVRON (CW1-8) ON EVERY OTHER DRUM (LEFT) (SEE LEGEND SP FOR SPACING)
 - DRUM WITH CHEVRON (CW1-8) ON EVERY OTHER DRUM (RIGHT) (SEE LEGEND SP FOR SPACING)
 - DRUM WITH VERTICAL PLATE (SEE LEGEND SP FOR SPACING)
 - TUBULAR MARKERS OR TRAFFIC CONES (SEE LEGEND SP FOR SPACING)



APPLICABLE STREETS FOR TYP-2

PHASE/STEP	STREET A	STREET B	STREET C	STREET S
PHASE 1 STEP 5	FISHER DRIVE		W. 41ST STREET	ALBA ROAD
PHASE 1 STEP 8	W. 41ST STREET	W. 42ND STREET	LAMONTE LANE	ALBA ROAD
PHASE 1 STEP 12	W. 43RD STREET	SUE BARNETT DRIVE	CHAMBOARD LANE	ALBA ROAD
PHASE 2 STEP 3	CURTIN STREET	THORNTON ROAD	WOODCHEST DRIVE	BRINKMAN LANE
PHASE 2 STEP 6	CANDLELIGHT LANE	JANISCH ROAD	LEHMAN STREET	BRINKMAN LANE
PHASE 3 STEP 5	FISHER DRIVE		W. 41ST STREET	ALBA ROAD
PHASE 3 STEP 6	W. 41ST STREET	W. 42ND STREET	LAMONTE LANE	ALBA ROAD
PHASE 3 STEP 9	W. 43RD STREET	AZALEA STREET	SUE BARNETT DRIVE	ALBA ROAD
PHASE 4 STEP 2	CHAMBOARD LANE	CURTIN STREET	THORNTON ROAD	BRINKMAN LANE

ALBA RD./CHAMBOARD LN./BRINKMAN LN. (STREET "S")
TYPICAL TRAFFIC CONTROL PLAN WITH ONE CROSS STREET CLOSURE AND ONE LANE ROADWAY WITH WORKZONE

- LEGEND:**
- TRAILER MOUNTED FLASHING ARROW PANEL (FAP)
 - SPACED @ 20' C-C (ALONG WORK ZONE & TAPERS) SPACED @ 5' C-C (AT INTERSECTIONS & ON RADIUS)
 - WRK ZN PAV MKR 4" SOLID WHITE (REMOV)
 - WRK ZN PAV MKR 4" SOLID YELLOW (REMOV)
 - WRK ZN PAV MKR 24" SOLID WHITE (REMOV)
 - WRK ZN PAV MKR 8" DASHED WHITE (CAT-TRACK) (REMOV)

SDPS
Houston Storm Drainage Program Support

PGAL
3131 BRINKMAN, SUITE 200
Houston, Texas 77042
Phone: (713) 822-1444
Fax: (713) 966-9333

iSani
CONSULTANTS
3143 YELLOWSTONE BLVD.
HOUSTON, TX 77054
TEL: (713) 747-2399
FAX: (713) 748-3748

DESIGNED BY: LANTECH
FR. NO. 14-0516
2/24/2016

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

TRAFFIC CONTROL PLAN
TYPICAL ONE LANE ROADWAY WITH WORK ZONE (TYP-2)

TCP-55 OF 70 SHEET 2 OF 8

FOR CITY OF HOUSTON USE ONLY

DRAWING SCALE: 1"=50'

CITY OF HOUSTON PW
JEFFREY T. HALL, P.E.
SHEET NO. 236 OF 385

55630

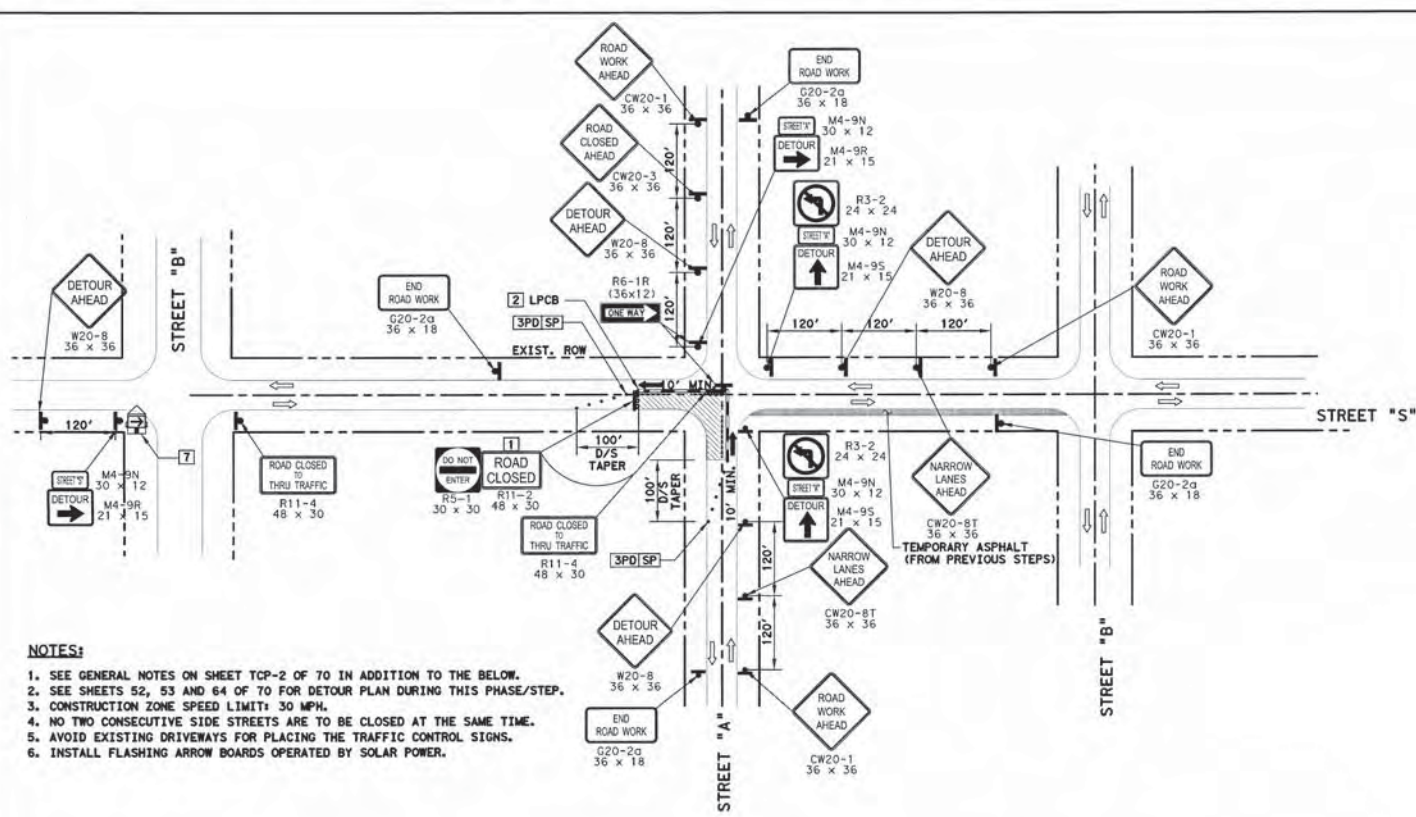
Garden Oaks Traffic Control Plans 0002 - Suedtrot

DATE: 2/24/2016 8:04:45 AM
PROJECT: SDPS/PGAL/14-0516/14-0516-0001-4



LEGEND:

- PERMANENT CONSTRUCTION WORK ZONE (PATTERN VARIES)
- PERMANENT CONSTRUCTION (PREVIOUS STEP)
- TEMPORARY ASPHALT PAVEMENT
- PLASTIC DRUM, CONE, OR TUBULAR MARKER PROPOSED SIGN POST
- TYPE III BARRICADE
- PROPOSED TRAFFIC FLOW
- EXISTING TRAFFIC FLOW
- LOW PROFILE CONCRETE BARRIER (LPCB) (TY 1 AND TY 2)
- PLASTIC DRUM (DRUM) (SEE LEGEND SP FOR SPACING)
- DRUM WITH CHEVRON (CW1-B) ON EVERY OTHER DRUM (LEFT) (SEE LEGEND SP FOR SPACING)
- DRUM WITH CHEVRON (CW1-B) ON EVERY OTHER DRUM (RIGHT) (SEE LEGEND SP FOR SPACING)
- DRUM WITH VERTICAL PANEL (SEE LEGEND SP FOR SPACING)
- TUBULAR MARKERS OR TRAFFIC CONES (SEE LEGEND SP FOR SPACING)



- NOTES:**
1. SEE GENERAL NOTES ON SHEET TCP-2 OF 70 IN ADDITION TO THE BELOW.
 2. SEE SHEETS 52, 53 AND 64 OF 70 FOR DETOUR PLAN DURING THIS PHASE/STEP.
 3. CONSTRUCTION ZONE SPEED LIMIT: 30 MPH.
 4. NO TWO CONSECUTIVE SIDE STREETS ARE TO BE CLOSED AT THE SAME TIME.
 5. AVOID EXISTING DRIVEWAYS FOR PLACING THE TRAFFIC CONTROL SIGNS.
 6. INSTALL FLASHING ARROW BOARDS OPERATED BY SOLAR POWER.

ALBA RD./CHAMBOARD LN./BRINKMAN LN. (STREET "S")

TYPICAL TRAFFIC CONTROL PLAN AT A TEE-INTERSECTION AND ONE LANE ROADWAY WITH WORKZONE

APPLICABLE STREETS FOR TYP-3

PHASE/STEP	STREET A	STREET B	STREET S
PHASE 2 STEP 6	JANISCH ROAD	LEHMAN STREET	BRINKMAN LANE
PHASE 3 STEP 3	ALBA ROAD	BRINKMAN LANE	FISHER DRIVE

- LEGEND:**
- TRAILER MOUNTED FLASHING ARROW PANEL (FAP)
 - SPACED @ 20' C-C (ALONG WORK ZONE & TAPERS) SPACED @ 5' C-C (AT INTERSECTIONS & ON RADII)
 - WRK ZN PAY MRK 4" SOLID WHITE (REMOV)
 - WRK ZN PAY MRK 4" SOLID YELLOW (REMOV)
 - WRK ZN PAY MRK 24" SOLID WHITE (REMOV)
 - WRK ZN PAY MRK 8" DASHED WHITE (CAT-TRACK) (REMOV)

PGAL 3131 BRIMMARD, SUITE 200
Houston, Texas 77042
Phone (713) 621-1444 Fax (713) 666-9333

isani CONSULTANTS
3143 YELLOWSTONE BLVD.
HOUSTON, TX 77004
TEL: (713) 747-2399
FAX: (713) 746-3748

SURVEYED BY: LANDTECH
FD NO. P-5576

2/24/2016

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

TRAFFIC CONTROL PLAN
TYPICAL INTERSECTION WITH WORK ZONE (TYP-3)

TCP-56 OF 70 SHEET 3 OF 8

WBS NUMBER M-000285-0001-4 FOR CITY OF HOUSTON USE ONLY

DRAWING SCALE 1"=50'

CITY OF HOUSTON PM JEFFREY T. HALL, P.E.

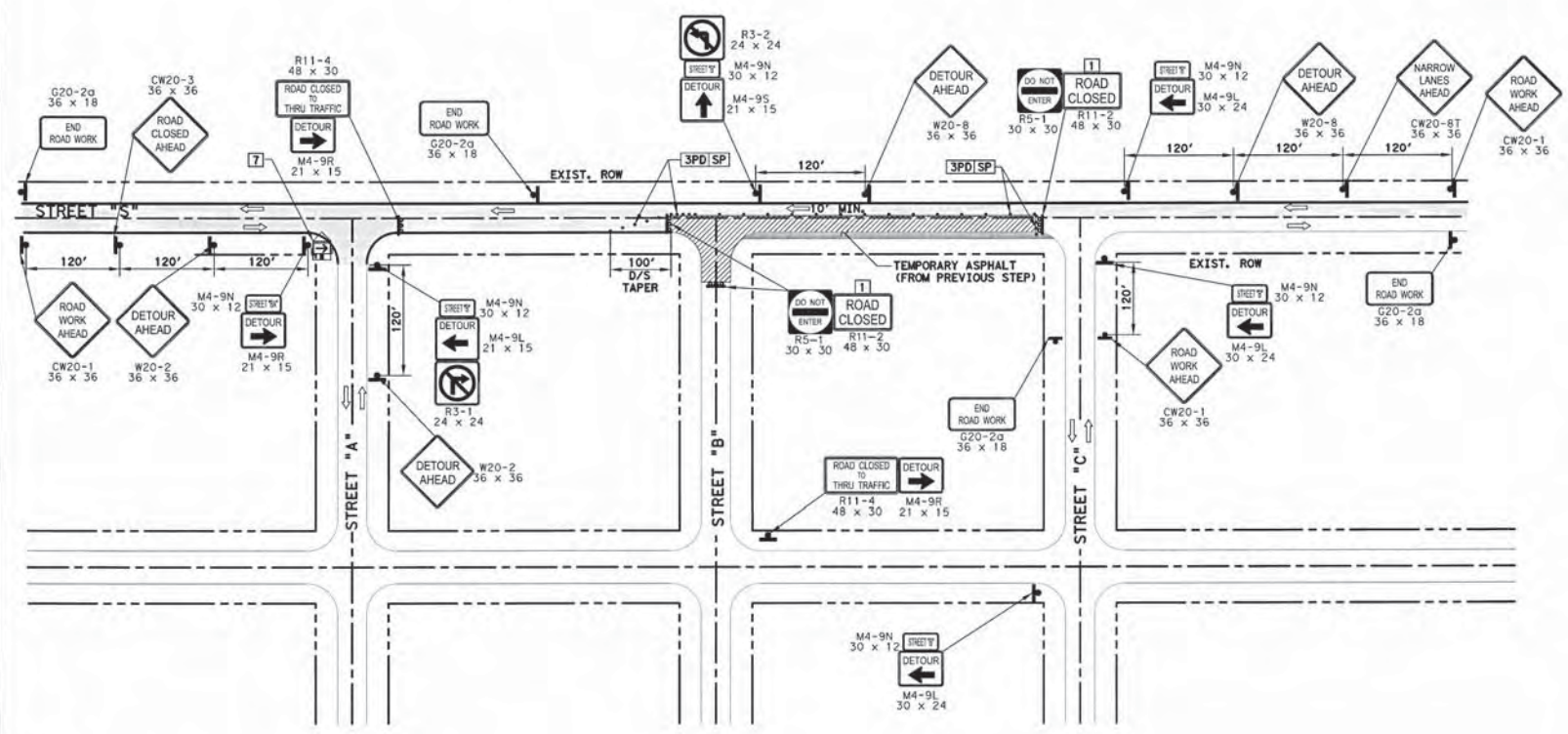
SHEET NO. 235 OF 385

DATE: 2/24/2016 9:45:46 AM P:\PROJECTS\2016\Garden Oaks\Traffic Control Plans\Typical 3.dwg



LEGEND:

- PERMANENT CONSTRUCTION WORK ZONE (PATTERN VARIES)
- PERMANENT CONSTRUCTION (PREVIOUS STEP)
- TEMPORARY ASPHALT PAVEMENT
- PLASTIC DRUM, CONE, OR TUBULAR MARKER
- PROPOSED SIGN POST
- [1] TYPE III BARRICADE
- PROPOSED TRAFFIC FLOW
- EXISTING TRAFFIC FLOW
- [2] LOW PROFILE CONCRETE BARRIER (LPCB) (TY 1 AND TY 2)
- [3PD] PLASTIC DRUM (DRUM) (SEE LEGEND SP FOR SPACING)
- [4CL] DRUM WITH CHEVRON (CW1-8) ON EVERY OTHER DRUM (LEFT) (SEE LEGEND SP FOR SPACING)
- [4CR] DRUM WITH CHEVRON (CW1-8) ON EVERY OTHER DRUM (RIGHT) (SEE LEGEND SP FOR SPACING)
- [5VP] DRUM WITH VERTICAL PANEL (SEE LEGEND SP FOR SPACING)
- [6MC] TUBULAR MARKERS OR TRAFFIC CONES (SEE LEGEND SP FOR SPACING)



- NOTES:**
1. SEE GENERAL NOTES ON SHEET TCP-2 OF 70 IN ADDITION TO THE BELOW.
 2. SEE SHEETS 52, 53 AND 65 OF 70 FOR DETOUR PLAN DURING THIS PHASE/STEP.
 3. CONSTRUCTION ZONE SPEED LIMIT: 30 MPH.
 4. NO TWO CONSECUTIVE SIDE STREETS ARE TO BE CLOSED AT THE SAME TIME.
 5. AVOID EXISTING DRIVEWAYS FOR PLACING THE TRAFFIC CONTROL SIGNS.
 6. INSTALL FLASHING ARROW BOARDS OPERATED BY SOLAR POWER.

ALBA RD./CHAMBOARD LN./BRINKMAN LN. (STREET "S")
 TYPICAL TRAFFIC CONTROL PLAN WITH ONE CROSS STEET CLOSURE
 AND ONE LANE ROADWAY WITH WORKZONE

APPLICABLE STREETS FOR TYP-4

PHASE/STEP	STREET A	STREET B	STREET C	STREET S
PHASE 4 STEP 4	THORNTON ROAD	WOODCREST DRIVE	MARTIN STREET	BRINKMAN LANE
PHASE 4 STEP 5	WOODCREST DRIVE	MARTIN STREET	JANISCH ROAD	BRINKMAN LANE
PHASE 4 STEP 7	OAK STREET	JANISCH ROAD	LEHMAN STREET	BRINKMAN LANE

- LEGEND:**
- [7] TRAILER MOUNTED FLASHING ARROW PANEL (FAP)
 - [SP] SPACED \bullet 20' C-C (ALONG WORK ZONE & TAPERS)
 SPACED \bullet 5' C-C (AT INTERSECTIONS & ON RADIUS)
 - [A] WRK ZN PAV WRK 4" SOLID WHITE (REMOV)
 - [B] WRK ZN PAV WRK 4" SOLID YELLOW (REMOV)
 - [C] WRK ZN PAV WRK 24" SOLID WHITE (REMOV)
 - [D] WRK ZN PAV WRK 8" DASHED WHITE (CAT-TRACK) (REMOV)

PGAL
3131 BRINKMAN, SUITE 200
HOUSTON, TEXAS 77042
Phone: (713) 622-1444
Fax: (713) 968-5333

isani
CONSULTANTS
3143 YELLOWSTONE BLVD.
HOUSTON, TX 77004
TEL: (713) 747-2369
FAX: (713) 748-3748

SURVEYED BY: LANDTECH
P.L. NO. 10-0332
2/24/2016

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

TRAFFIC CONTROL PLAN
TYPICAL ONE LANE ROADWAY WITH WORK ZONE (TYP-4)

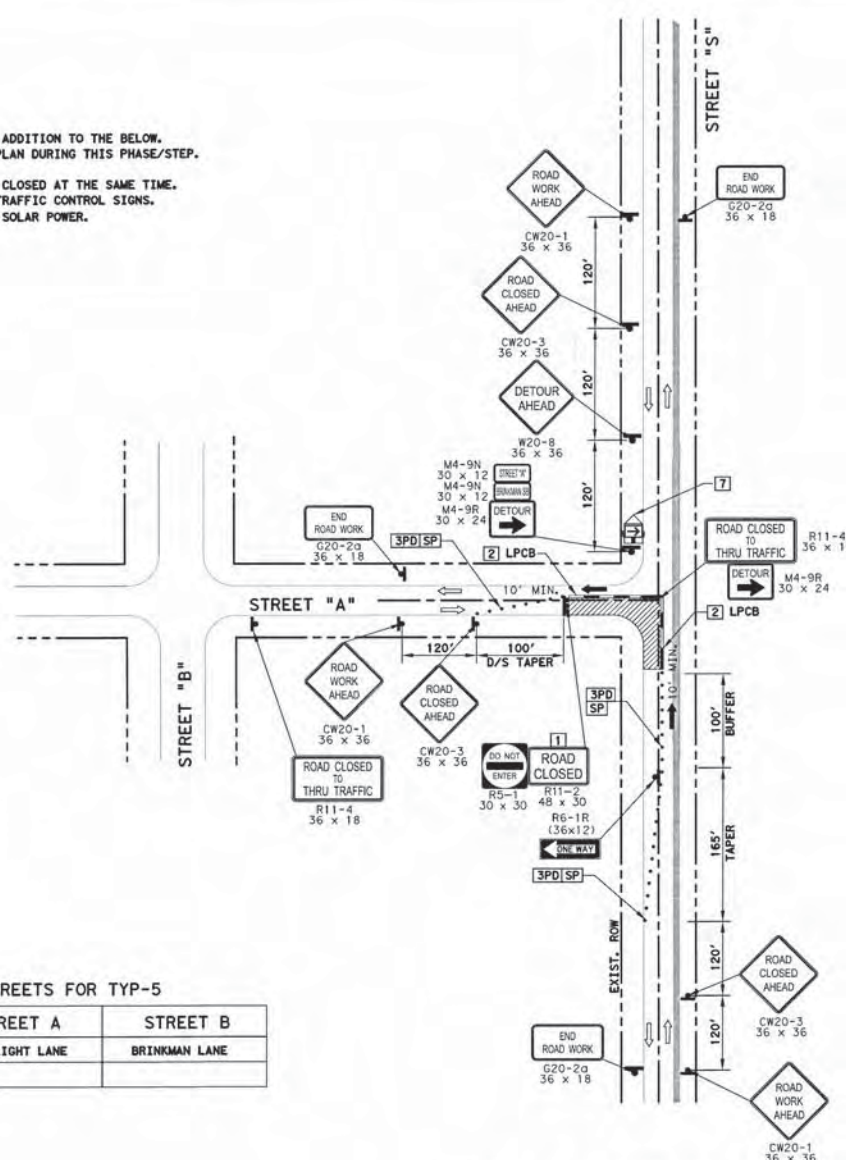
TCP-57 OF 70 SHEET 4 OF 8

MDS NUMBER M-000285-0001-4	FOR CITY OF HOUSTON USE ONLY
DRAWING SCALE 1"=50'	5630
CITY OF HOUSTON PW JEFFREY T. HALL, P.E.	
SHEET NO. 240 OF 385	

DATE: 2/24/2016 8:40:48 AM
 P:\ACT\1305\5050\Drawings\Traffic Control Plans\TCP-Typ04.dgn

NOTES:

1. SEE GENERAL NOTES ON SHEET TCP-2 OF 70 IN ADDITION TO THE BELOW.
2. SEE SHEET 52, 53 AND 65 OF 70 FOR DETOUR PLAN DURING THIS PHASE/STEP.
3. CONSTRUCTION ZONE SPEED LIMIT: 30 MPH.
4. NO TWO CONSECUTIVE SIDE STREETS ARE TO BE CLOSED AT THE SAME TIME.
5. AVOID EXISTING DRIVEWAYS FOR PLACING THE TRAFFIC CONTROL SIGNS.
6. INSTALL FLASHING ARROW BOARDS OPERATED BY SOLAR POWER.



APPLICABLE STREETS FOR TYP-5

PHASE/STEP	STREET A	STREET B
PHASE 2 STEP 5A	CANDLELIGHT LANE	BRINKMAN LANE

ALBA RD./CHAMBOARD LN./BRINKMAN LN. (STREET "S")
TYPICAL TRAFFIC CONTROL PLAN WITH
ONE LANE ROADWAY WITH WORKZONE



LEGEND:

- PERMANENT CONSTRUCTION WORK ZONE (PATTERN VARIES)
- PERMANENT CONSTRUCTION (PREVIOUS STEP)
- TEMPORARY ASPHALT PAVEMENT
- PLASTIC DRUM, CONE, OR TUBULAR MARKER
- PROPOSED SIGN POST
- [1] TYPE III BARRICADE
- PROPOSED TRAFFIC FLOW
- EXISTING TRAFFIC FLOW
- [2] LOW PROFILE CONCRETE BARRIER (LPCB) (TY 1 AND TY 2)
- [3PD] PLASTIC DRUM (DRUM) (SEE LEGEND SP FOR SPACING)
- [4CL] DRUM WITH CHEVRON (CW1-B) ON EVERY OTHER DRUM (LEFT) (SEE LEGEND SP FOR SPACING)
- [4CR] DRUM WITH CHEVRON (CW1-B) ON EVERY OTHER DRUM (RIGHT) (SEE LEGEND SP FOR SPACING)
- [5VP] DRUM WITH VERTICAL PANEL (SEE LEGEND SP FOR SPACING)
- [6MC] TUBULAR MARKERS OR TRAFFIC CONES (SEE LEGEND SP FOR SPACING)

LEGEND:

- [7] TRAILER MOUNTED FLASHING ARROW PANEL (FAP)
- [SP] SPACED @ 20' C-C (ALONG WORK ZONE & TAPERS)
SPACED @ 5' C-C (AT INTERSECTIONS & ON RADII)
- [A] WRK ZN PAV MKR 4" SOLID WHITE (REMOV)
- [B] WRK ZN PAV MKR 4" SOLID YELLOW (REMOV)
- [C] WRK ZN PAV MKR 24" SOLID WHITE (REMOV)
- [D] WRK ZN PAV MKR 8" DASHED WHITE (CAT-TRACK) (REMOV)

SDPS
Houston Storm Drainage Program Support

PGAL
3131 BRIDGEPARK, SUITE 200
HOUSTON, TEXAS 77054
Phone (713) 622-1444
Fax (713) 666-9333

ESANI CONSULTANTS
ENGINEERS | ARCHITECTS | MANAGERS
TS&E FIRM NO. E-4575
3143 YELLOWSTONE BLVD.
HOUSTON, TX 77054
TEL (713) 747-2599
FAX (713) 746-3746

3131 BRIDGEPARK, SUITE 200
HOUSTON, TEXAS 77054
Phone (713) 622-1444
Fax (713) 666-9333

2/24/2016

SURVEYED BY: LANDTECH
FB NO. P-5576

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

TRAFFIC CONTROL PLAN
TYPICAL ONE LANE ROADWAY WITH WORK ZONE (TYP-5)

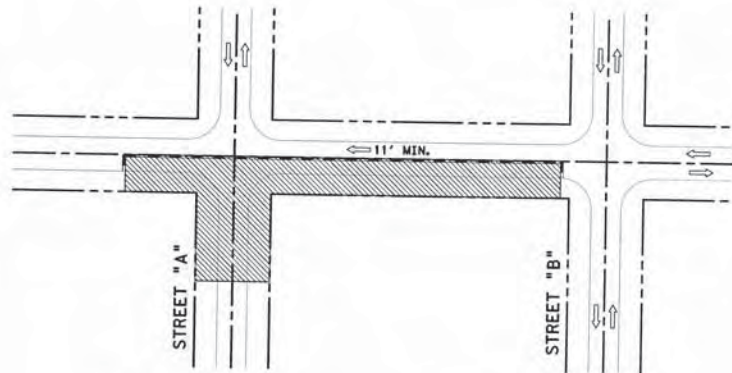
TCP-58 OF 70 SHEET 5 OF 6

WDS NUMBER	FOR CITY OF HOUSTON USE ONLY
M-000285-0001-4	
DRAWING SCALE	
1"=50'	
CITY OF HOUSTON PM	
JEFFREY T. HALL, P.E.	
SHEET NO. 241 OF 385	

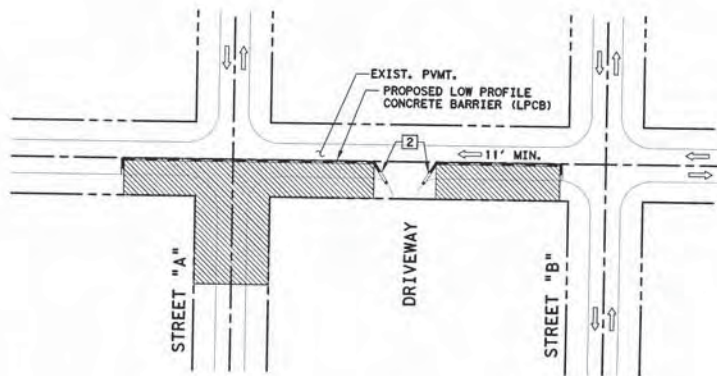
5563U

DATE: 2/24/2016 9:40:00 AM
PROJECT: C:\Users\jhall\My Documents\Traffic Control Plans\TCP-58.dwg

TYPICAL FOR TWO WAY TRAFFIC WITH LPCB
SEE TYP-4 FOR SIGNAGE PLACEMENT

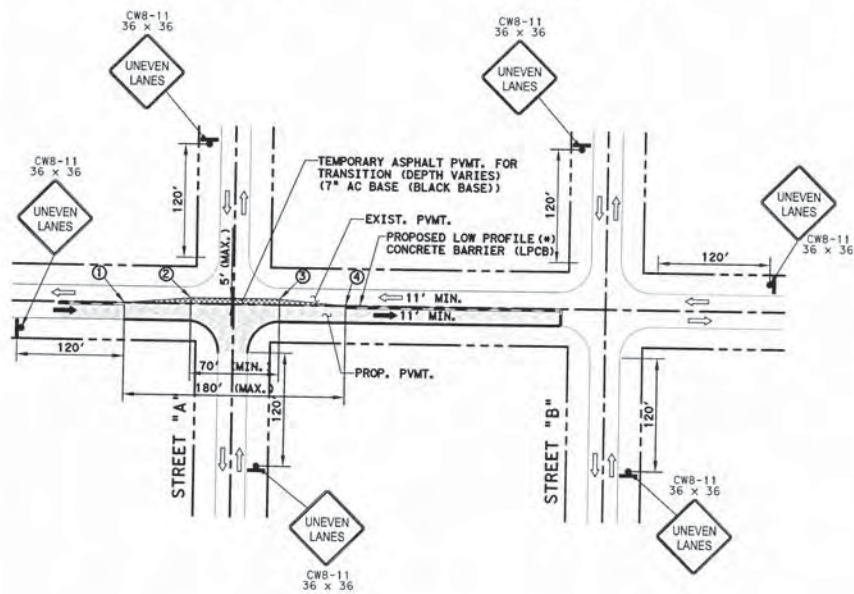


TYPICAL FOR DRIVEWAY ACCESS DURING CONSTRUCTION



LEGEND:

- PERMANENT CONSTRUCTION WORK ZONE (PATTERN VARIES)
- PERMANENT CONSTRUCTION (PREVIOUS STEP)
- TEMPORARY ASPHALT PAVEMENT
- PLASTIC DRUM, CONE, OR TUBULAR MARKER
- PROPOSED SIGN POST
- TYPE III BARRICADE
- PROPOSED TRAFFIC FLOW
- EXISTING TRAFFIC FLOW
- LOW PROFILE CONCRETE BARRIER (LPCB) (TY 1 AND TY 2)
- PLASTIC DRUM (DRUM) (SEE LEGEND SP FOR SPACING)
- DRUM WITH CHEVRON (CW1-8) ON EVERY OTHER DRUM (LEFT) (SEE LEGEND SP FOR SPACING)
- DRUM WITH CHEVRON (CW1-8) ON EVERY OTHER DRUM (RIGHT) (SEE LEGEND SP FOR SPACING)
- DRUM WITH VERTICAL PANEL (SEE LEGEND SP FOR SPACING)
- TUBULAR MARKERS OR TRAFFIC CONES (SEE LEGEND SP FOR SPACING)



- ① BEGIN ASPHALT PAVEMENT TRANSITION AND END LPCB FOR TRAFFIC SEPARATION BEGIN MAXIMUM LIMITS OF ASPHALT PAVEMENT FOR TRANSITION (180' MAX.)
- ② BEGIN MINIMUM LIMITS OF ASPHALT PAVEMENT FOR TRANSITION (70' MIN.)
- ③ END MINIMUM LIMITS OF ASPHALT PAVEMENT FOR TRANSITION (70' MIN.)
- ④ END ASPHALT PAVEMENT TRANSITION AND BEGIN LPCB FOR TRAFFIC SEPARATION END MAXIMUM LIMITS OF ASPHALT PAVEMENT FOR TRANSITION (180' MAX.)

(*) PROVIDE LPCB TO SEPARATE TWO WAY TRAFFIC WITH ONE LANE ON THE EXISTING PAVEMENT AND OTHER ON THE PROPOSED PAVEMENT.

PLACE ASPHALT PAVMT FOR MATCHING THE EXISTING AND PROPOSED PAVEMENT ELEVATIONS. MAXIMUM DEPTH AT THE INTERSECTION VARIES. SEE THE RELEVANT INTERSECTIONS FOR THE EXACT DIMENSIONS.

LEGEND:

- TRAILER MOUNTED FLASHING ARROW PANEL (FAP)
- SPACED @ 20' C-C (ALONG WORK ZONE & TAPERS) SPACED @ 5' C-C (AT INTERSECTIONS & ON RADII)
- WRK ZN PAV MRK 4" SOLID WHITE (REMOV)
- WRK ZN PAV MRK 4" SOLID YELLOW (REMOV)
- WRK ZN PAV MRK 24" SOLID WHITE (REMOV)
- WRK ZN PAV MRK 8" DASHED WHITE (CAT-TRACK) (REMOV)

SDPS
Houston Storm Drainage Program Support

PGAL
THE 800
NO. 1-595-2

3111 BISHOPMARK, SUITE 200
HOUSTON, TEXAS 77044
PHONE (713) 622-1444
FAX (713) 668-9333

iSanI CONSULTANTS
Professional & Consulting Engineers
STATE FIRM NO. F-4575
3143 YELLOWSTONE BLVD.
HOUSTON, TX 77004
TEL: (713) 747-2369
FAX: (713) 748-3748

2/24/2016

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

TRAFFIC CONTROL PLAN
TYPICAL ONE LANE ROADWAY WITH WORK ZONE (TYP-7)

TCP-59A OF 70 SHEET 7 OF 8

NBS NUMBER FOR CITY OF HOUSTON USE ONLY

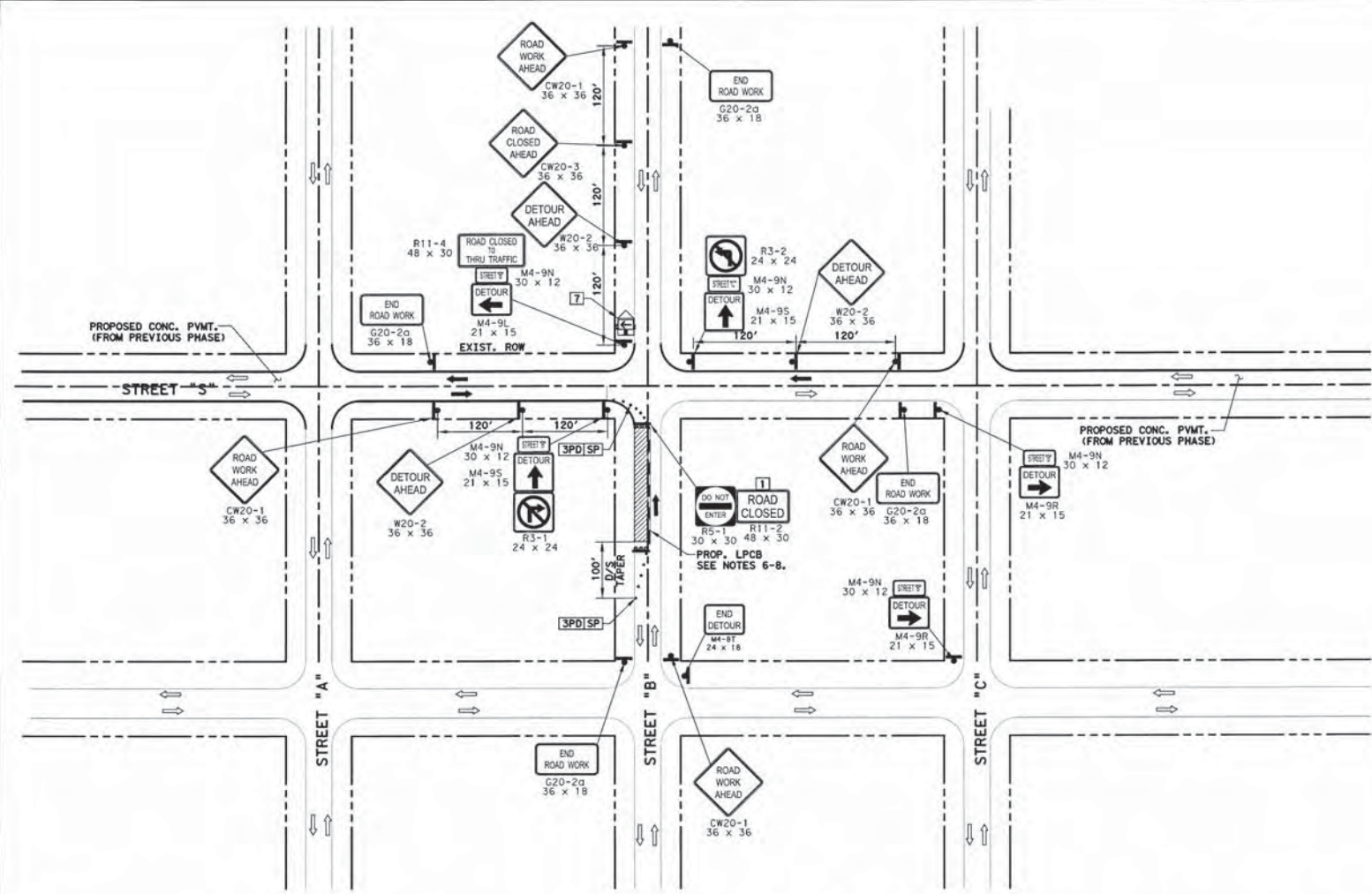
M-000285-0001-4
DRAWING SCALE
1"=50'
CITY OF HOUSTON PM
JEFFREY T. HALL, P.E.
SHEET NO. 242A OF 385

5563U



LEGEND:

- PERMANENT CONSTRUCTION WORK ZONE (PATTERN VARIES)
- PERMANENT CONSTRUCTION (PREVIOUS STEP)
- TEMPORARY ASPHALT PAVEMENT
- PLASTIC DRUM, CONE, OR TUBULAR MARKER PROPOSED SIGN POST
- TYPE III BARRICADE
- PROPOSED TRAFFIC FLOW
- EXISTING TRAFFIC FLOW
- LOW PROFILE CONCRETE BARRIER (LPCB) (TY 1 AND TY 2)
- PLASTIC DRUM (DRUM) (SEE LEGEND SP FOR SPACING)
- DRUM WITH CHEVRON (CW1-8) ON EVERY OTHER DRUM (LEFT) (SEE LEGEND SP FOR SPACING)
- DRUM WITH CHEVRON (CW1-8) ON EVERY OTHER DRUM (RIGHT) (SEE LEGEND SP FOR SPACING)
- DRUM WITH VERTICAL PANEL (SEE LEGEND SP FOR SPACING)
- TUBULAR MARKERS OR TRAFFIC CONES (SEE LEGEND SP FOR SPACING)



NOTES:

1. SEE GENERAL NOTES ON SHEET TCP-2 OF 70 IN ADDITION TO THE BELOW.
2. SEE SHEETS TCP-17 & 19 OF 70 FOR THE CONSTRUCTION OF INTERSECTION QUADRANTS.
3. CONSTRUCTION ZONE SPEED LIMIT@ 30 MPH.
4. NO TWO CONSECUTIVE SIDE STREETS ARE TO BE CLOSED AT THE SAME TIME.
5. AVOID EXISTING DRIVEWAYS FOR PLACING THE TRAFFIC CONTROL SIGNS.
6. PLACE LPCB DURING THE CONSTRUCTION OF STORM SEWER AND HALF OF THE PROPOSED PAVEMENT.
7. PLACE DRUMS DURING THE CONSTRUCTION OF OTHER HALF OF THE PROPOSED PAVEMENT.
8. CONTRACTOR SHALL INSTALL LOW PROFILE CONCRETE BARRIER AT STORM SEWER LOCATIONS. LPCB TO REMAIN AT LOCATIONS WHERE THE ELEVATION DIFFERENCE BETWEEN THE DRIVING SURFACE AND WORK AREA EXCEEDS 18 INCHES.
9. INSTALL FLASHING ARROW BOARDS OPERATED BY SOLAR POWER.

APPLICABLE STREETS FOR TYP-7A

PHASE/STEP	STREET A	STREET B	STREET C	STREET S
PHASE 4 STEP 2	CHAMBOARD LANE	CURTIN STREET	THORNTON STREET	BRINKMAN LANE
PHASE 4 STEP 3	CURTIN STREET	THORNTON STREET	WOODCREST DRIVE	BRINKMAN LANE

ALBA ST. / BRINKMAN LN. (STREET "S")
 TYPICAL TRAFFIC CONTROL PLAN WITH ONE CROSS STREET CLOSURE
 AND ONE LANE ROADWAY WITH WORKZONE

LEGEND:

- TRAILER MOUNTED FLASHING ARROW PANEL (FAP)
- SPACED @ 20' C-C (ALONG WORK ZONE & TAPERS)
SPACED @ 5' C-C (AT INTERSECTIONS & ON RADII)
- WRK ZN PAV MRK 4" SOLID WHITE (REMOV)
- WRK ZN PAV MRK 4" SOLID YELLOW (REMOV)
- WRK ZN PAV MRK 24" SOLID WHITE (REMOV)
- WRK ZN PAV MRK 8" DASHED WHITE (CAT-TRACK) (REMOV)

PGAL
3131 BRIMMORF, SUITE 200
HOUSTON, TEXAS 77042
PHONE (713) 822-1444
FAX (713) 968-8333

ISANI CONSULTANTS
3143 YELLOWSTONE BLVD.
HOUSTON, TX 77004
TEL: (713) 747-2369
FAX: (713) 746-3746

2/24/2016

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

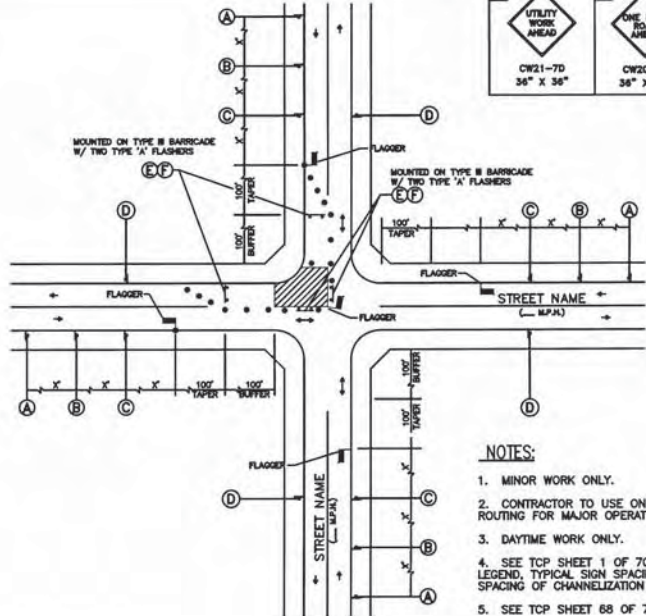
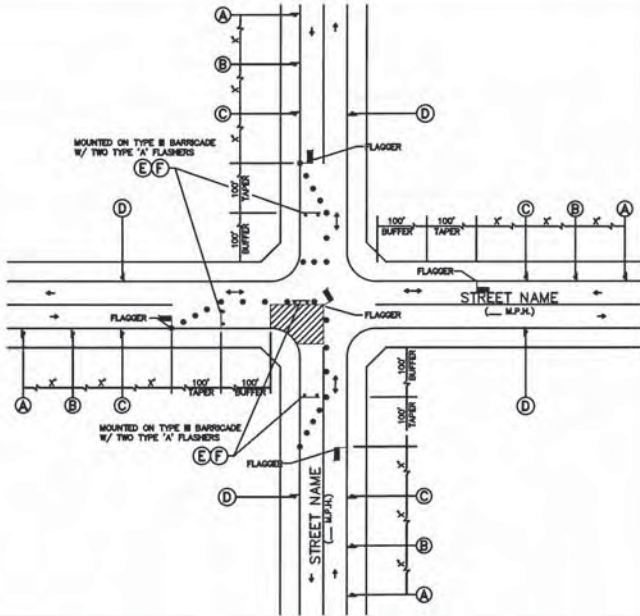
GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

TRAFFIC CONTROL PLAN
TYPICAL ONE LANE ROADWAY WITH WORK ZONE (TYP-7A)

TCP-59B OF 70 SHEET 7A OF 8

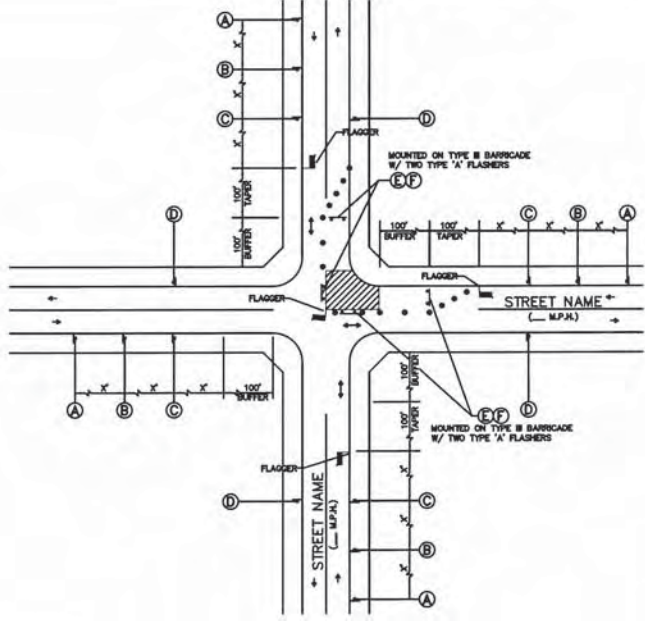
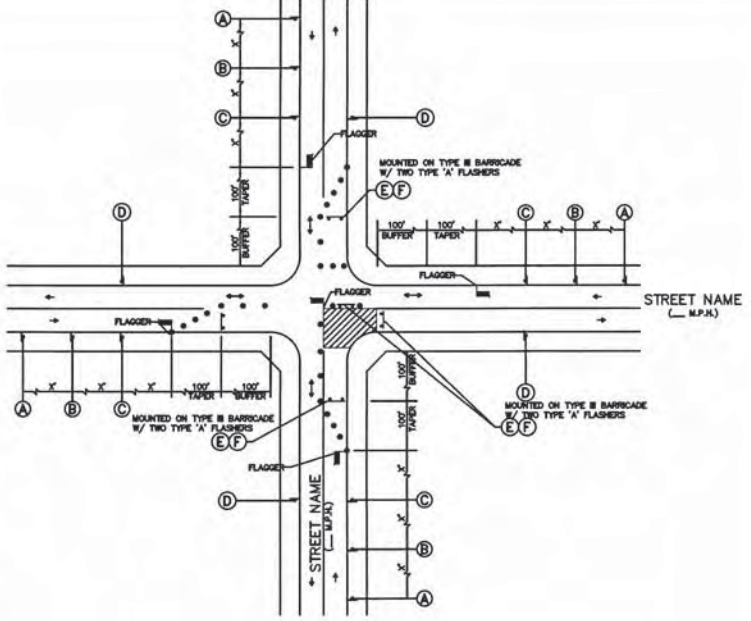
WBS NUMBER	FOR CITY OF HOUSTON USE ONLY
M-000285-0001-4	
DRAWING SCALE	
1"=50'	
CITY OF HOUSTON PW	
JEFFREY T. HALL, P.E.	
SHEET NO. 242B OF 385	

DATE: 2/24/2016 9:40:56 AM PROJECT: C:\pwork\2016\02\02\Traffic Control Plans\TYP-7A.dwg



A UTILITY WORK AHEAD CW21-7D 36" X 36"	B ONE LANE ROAD AHEAD CW20-4D 36" X 36"	C CW20-7d 36" X 36"	D END ROAD WORK G25-3a 36" X 18"
E RS-1 30" X 30"	F R11-2 48" X 30"		

- NOTES:**
- MINOR WORK ONLY.
 - CONTRACTOR TO USE ONE-LANE ROAD CLOSURE AND DETOUR ROUTING FOR MAJOR OPERATIONS.
 - DAYTIME WORK ONLY.
 - SEE TCP SHEET 1 OF 70 FOR TRAFFIC CONTROL PLAN NOTES, LEGEND, TYPICAL SIGN SPACING, TAPER LENGTHS, AND SUGGESTED SPACING OF CHANNELIZATION DEVICES.
 - SEE TCP SHEET 68 OF 70 FOR BARRICADE STANDARDS.



SDPS
Houston Storm Drainage Program Support

PGAL
3131 BRIMMORR, SUITE 200
HOUSTON, TEXAS 77042
Phone (713) 822-1444
Fax (713) 988-4333

isani
CONSULTANTS
3143 YELLOWSTONE BLVD.
HOUSTON, TX 77004
TEL: (713) 749-2399
FAX: (713) 748-3748

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

TYPICAL 4-WAY INTERSECTION WITH FLAGGING OPERATION

TCP-61 OF 70 SHEET 2 OF 4

WBS NUMBER: M-000285-0001-4 FOR CITY OF HOUSTON USE ONLY







DRAWING SCALE: NTS

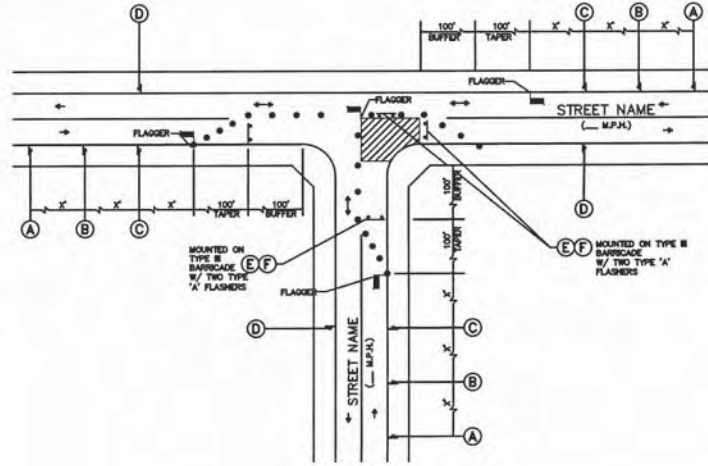
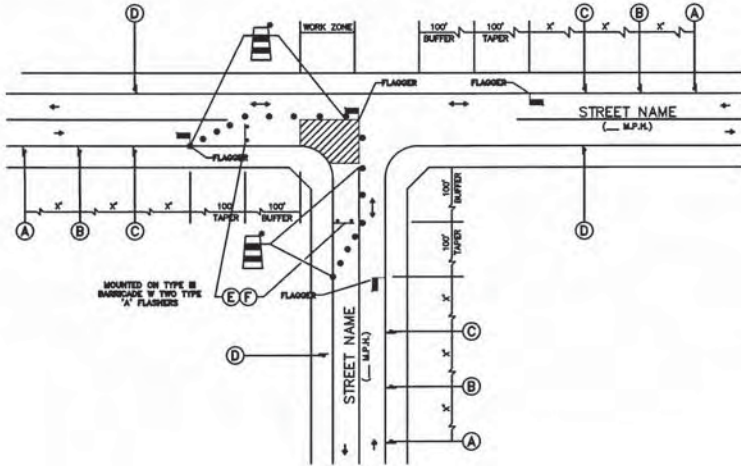
CITY OF HOUSTON PM: JEFFREY T. HALL, P.E.

SHEET NO. 244 OF 385






55630

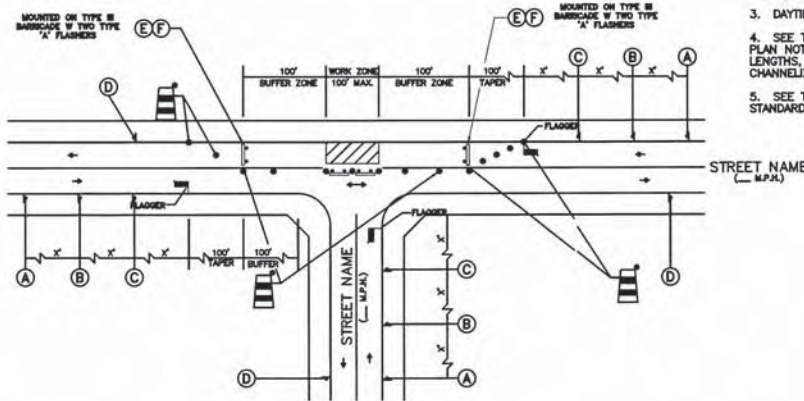
DATE: 2/24/2016 9:45:03 AM
PROJECT: SDPS/Storm Drainage/Traffic Control Plans/Traffic Control Plans/Typical.dgn

A	B	C	D	E	F
					
CW21-7D 36" X 36"	CW20-4D 36" X 36"	CW20-7a 36" X 36"	020-2a 36" X 18"	RS-1 30" X 30"	R11-2 48" X 30"



LEGEND

-  SIGN
-  FLAGGER
-  APPROVED CHANNELIZATION DEVICE
-  TRAFFIC FLOW
-  BARRICADE



- NOTES:**
- MINOR WORK ONLY.
 - CONTRACTOR TO USE ONE-LANE ROAD CLOSURE AND DETOUR ROUTING FOR MAJOR OPERATIONS.
 - DAYTIME WORK ONLY.
 - SEE TCP SHEET 1 OF 70 FOR TRAFFIC CONTROL PLAN NOTES, LEGEND, TYPICAL SIGN SPACING, TAPER LENGTHS, AND SUGGESTED SPACING OF CHANNELIZATION DEVICES.
 - SEE TCP SHEET 68 OF 70 FOR BARRICADE STANDARDS.

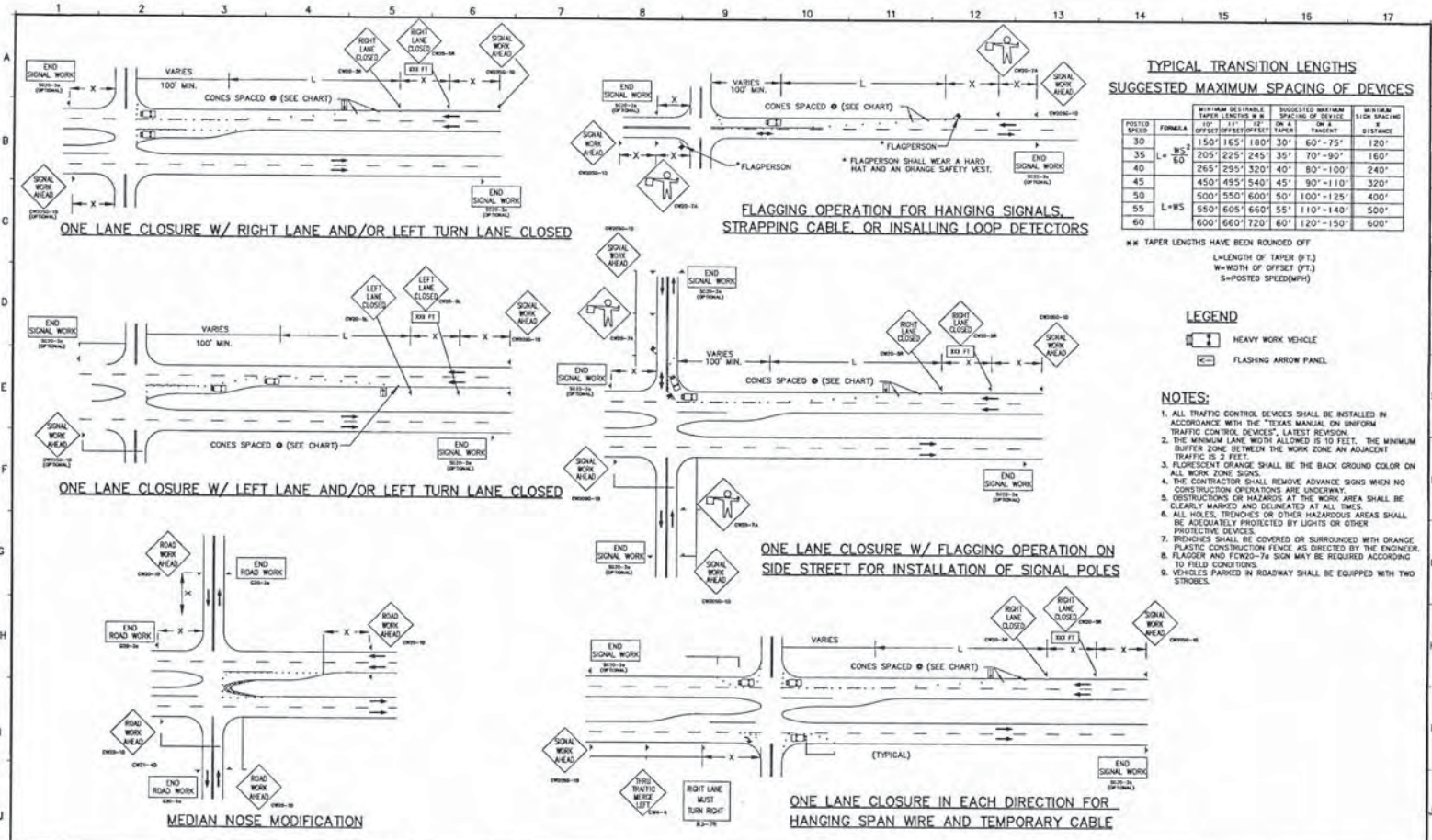


CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING
TYPICAL TEE INTERSECTION WITH FLAGGING OPERATION

TCP-62 OF 70	SHEET 3 OF 4
WBS NUMBER M-000285-0001-4	FOR CITY OF HOUSTON USE ONLY
DRAWING SCALE NTS	5/630
CITY OF HOUSTON PM JEFFREY T. HALL, P.E.	
SHEET NO. 245 OF 385	

DATE: 2/24/2016 9:40:58 AM
PATH: C:\Users\jhall\OneDrive\Documents\Traffic Control Plans\TCP-70\plan.dgn



**TYPICAL TRANSITION LENGTHS
SUGGESTED MAXIMUM SPACING OF DEVICES**

POSTED SPEED	FORMULA	MINIMUM DESIRABLE TAPER LENGTH # S	MINIMUM DESIRABLE OFFSET # FT (MIN)	SUGGESTED MAXIMUM SPACING OF DEVICES	MINIMUM SIDE SPACING # DISTANCE
30	$L = 1.5S$	100'	15'	120'	120'
35	$L = 1.5S$	150'	15'	180'	120'
40	$L = 1.5S$	205'	225'	245'	35'
45	$L = 1.5S$	265'	295'	320'	40'
50	$L = 1.5S$	320'	40'	80'-100'	240'
55	$L = 1.5S$	450'	495'	540'	45'
60	$L = 1.5S$	500'	550'	600'	50'
					90'-110'
					320'
					400'
					500'
					600'

** TAPER LENGTHS HAVE BEEN ROUNDED OFF
L=LENGTH OF TAPER (FT.)
W=WIDTH OF OFFSET (FT.)
S=POSTED SPEED(MPH)

LEGEND

- HEAVY WORK VEHICLE
- FLASHING ARROW PANEL

NOTES:

1. ALL TRAFFIC CONTROL DEVICES SHALL BE INSTALLED IN ACCORDANCE WITH THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST REVISION.
2. THE MINIMUM LANE WIDTH ALLOWED IS 10 FEET. THE MINIMUM BUFFER ZONE BETWEEN THE WORK ZONE AND ADJACENT TRAFFIC IS 2 FEET.
3. FLUORESCENT ORANGE SHALL BE THE BACKGROUND COLOR ON ALL WORK ZONE SIGNS.
4. THE CONTRACTOR SHALL REMOVE ADVANCE SIGNS WHEN NO CONSTRUCTION OPERATIONS ARE UNDERWAY.
5. OBSTRUCTIONS OR HAZARDS AT THE WORK AREA SHALL BE CLEARLY MARKED AND DELINEATED AT ALL TIMES.
6. ALL HOLES, TRENCHES OR OTHER HAZARDOUS AREAS SHALL BE ADEQUATELY PROTECTED BY LIGHTS OR OTHER PROTECTIVE DEVICES.
7. TRENCHES SHALL BE COVERED OR SURROUNDED WITH ORANGE PLASTIC CONSTRUCTION FENCE AS DIRECTED BY THE ENGINEER.
8. FLAGGER AND FCW30-70 SIGN MAY BE REQUIRED ACCORDING TO FIELD CONDITIONS.
9. VEHICLES PARKED IN ROADWAY SHALL BE EQUIPPED WITH TWO STROBES.

NO.	DATE	REVISION	BY:	CHKD:	APPROVAL (SIGNATURE):

CITY OF HOUSTON
PUBLIC WORKS & ENGINEERING DEPARTMENT
TRAFFIC SIGNAL ENGINEERING
AND OPERATIONS SECTION



TRAFFIC SIGNAL DETAILS
TRAFFIC CONTROL PLAN
FOR SIGNAL CONSTRUCTION

DWG. NO. 02893-17 SHEET NO. _____

SDPS
Houston Storm Drainage Program Support

PGAL
3131 BRADPARK, SUITE 200
HOUSTON, TEXAS 77042
Phone (713) 622-1444
Fax (713) 668-8333

iSani CONSULTANTS
3143 YELLOWSTONE BLVD.
HOUSTON, TX 77054
TEL: (713) 748-3368
FAX: (713) 748-3748

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING
TRAFFIC CONTROL PLAN FOR TRAFFIC SIGNAL CONSTRUCTION

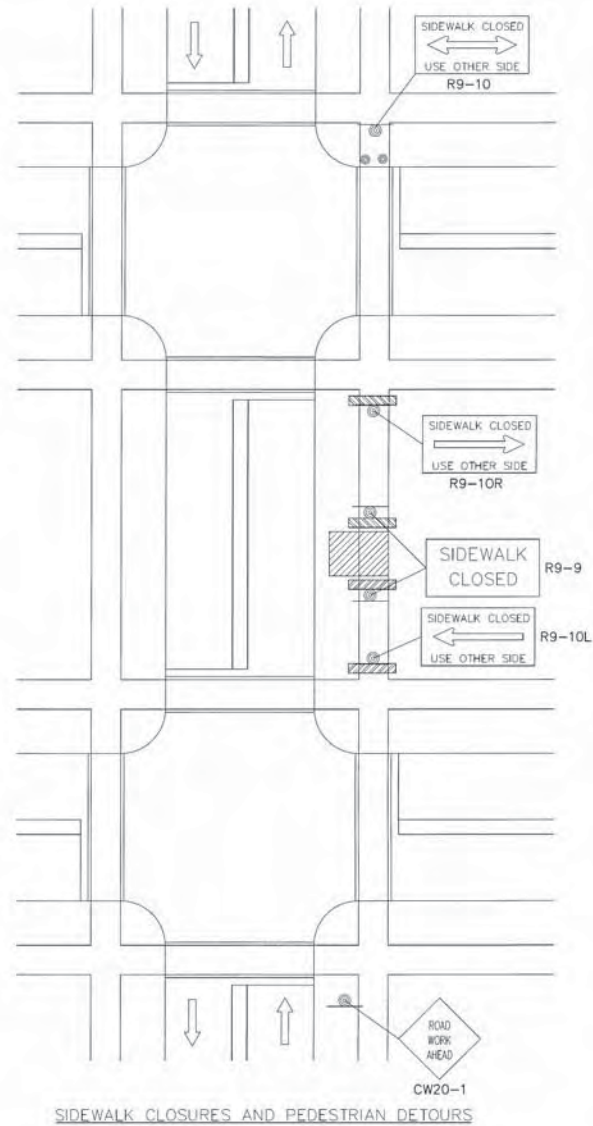
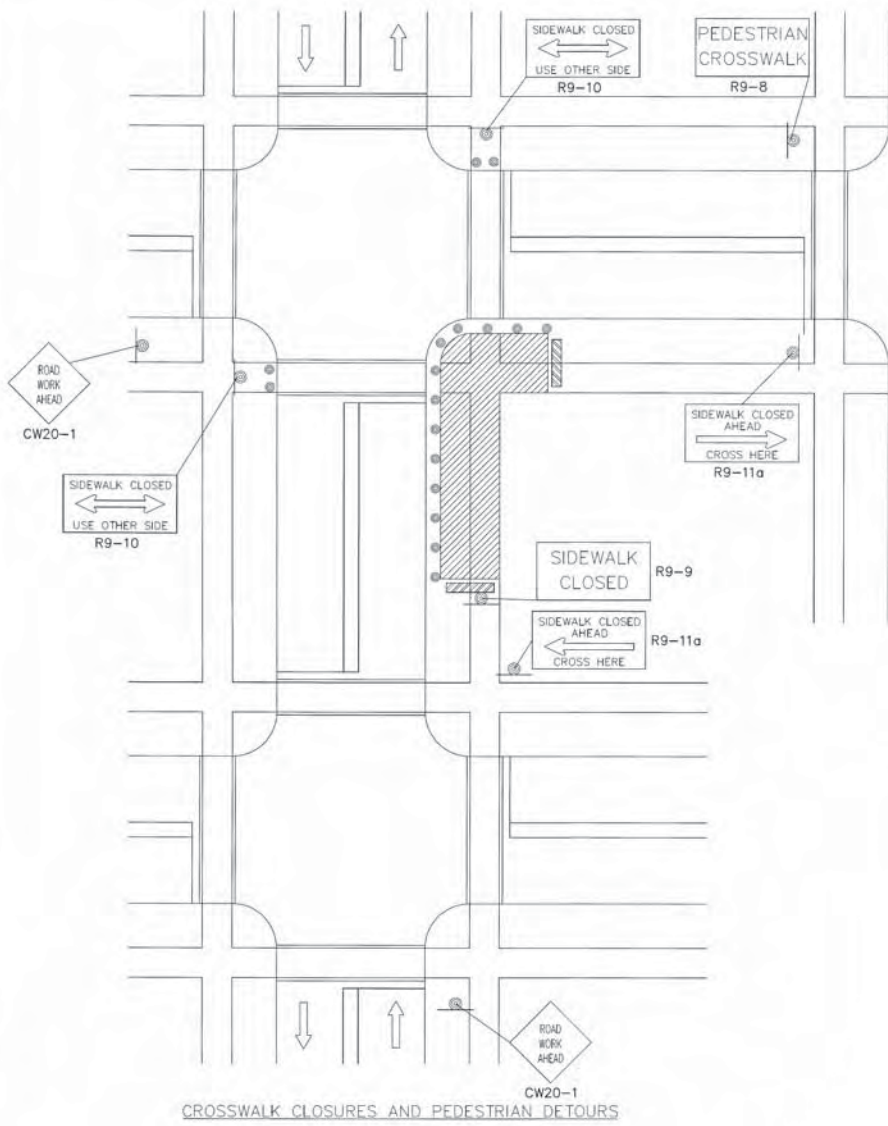
TCP-66 OF 70 SHEET 1 OF 5

WBS NUMBER: M-000285-0001-4
DRAWING SCALE: NTS
CITY OF HOUSTON, PM
JEFFREY T. HALL, P.E.
SHEET NO. 249 OF 385

FOR CITY OF HOUSTON USE ONLY
55630

DATE: 2/24/2016 9:40:37 AM PROJECT: C:\Users\jhall\Documents\Traffic Control Plans\TCP-02893-17.dwg

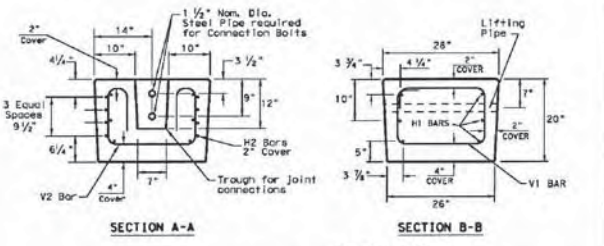
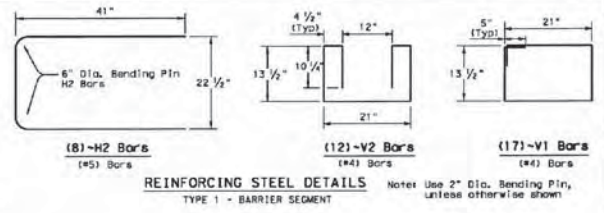
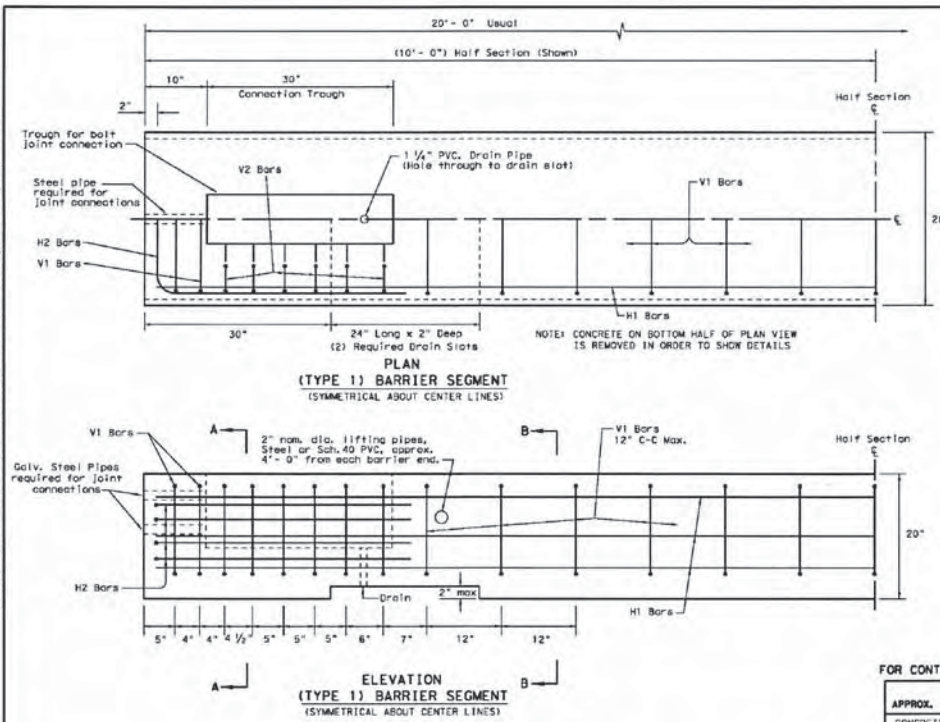
DATE: 2/24/2016 3:40 PM
 P:\ACT\151\15106\15106\Traffic Control Plans\TCPS\Sheet 2.dwg



- LEGEND**
- SIGN
 - BARRELS
 - ▨ BARRICADE
 - ▩ WORK ZONE

<p>SDPS Houston Storm Drainage Program Support</p>	
<p>PGAL THE CITY OF HOUSTON 3131 BISHOPWALK, SUITE 200 HOUSTON, TEXAS 77042 PHONE (713) 822-1444 FAX (713) 866-9333</p>	
<p>iSani CONSULTANTS engineers & construction managers TYPE FIRM NO. F-4575 3143 YELLOWSTONE BLVD. HOUSTON, TX 77054 TEL: (713) 747-2389 FAX: (713) 746-3748</p>	<p>2/24/2016</p>
<p>SURVEYED BY: LANDECH PR. NO. P-0576</p>	
<p>CITY OF HOUSTON DEPARTMENT OF PUBLIC WORKS AND ENGINEERING</p>	
<p>GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING</p>	
<p>TYPICAL CROSSWALK AND SIDEWALK CLOSURES</p>	
<p>TCP-67 OF 70</p>	<p>SHEET 2 OF 5</p>
<p>WBS NUMBER M-000285-0001-4</p>	<p>FOR CITY OF HOUSTON USE ONLY.</p>
<p>DRAWING SCALE NTS</p>	<p>5563U</p>
<p>CITY OF HOUSTON PM JEFFREY T. HALL, P.E.</p>	
<p>SHEET NO. 250 OF 385</p>	

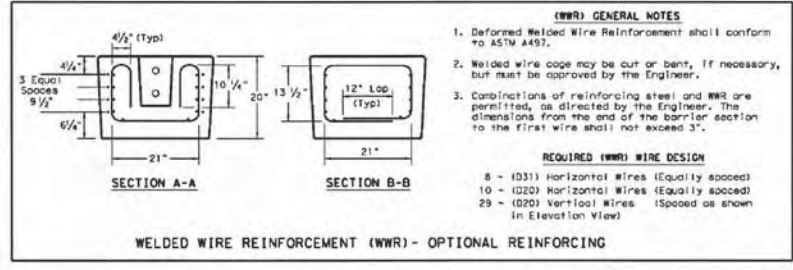
DISCLAIMER: This standard is governed by the "Texas Engineering Practice Act". No warranty of any kind is made by TxDOT for any purpose whatsoever. TxDOT assumes no responsibility for the conversion of this standard to metric units or for any other purpose. TxDOT assumes no responsibility for the conversion of this standard to metric units or for any other purpose.



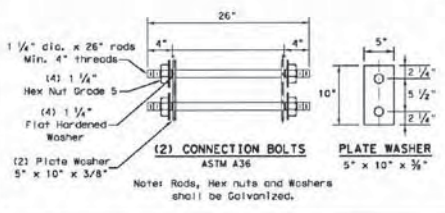
- GENERAL NOTES**
- Low Profile Concrete Barrier (LPCB), is approved for use in temporary work zone locations, where the posted speed is 45 mph, or less.
 - Concrete shall be Class H for precast barrier with a minimum compressive strength of 3,600 psi.
 - Where used, rebar reinforcement shall be Grade 60 and conform to ASTM A615.
 - Precast LPCB barrier length shall be 20 ft.
 - All barrier edges shall have 3/4" chamfer or a tapered radius.
 - Joint connection hardware shall be in accordance with Item 449, "Anchor Bolts," and is considered subsidiary.
 - Steel pipe required for joint connection bolts shall be galvanized in accordance with Item 445, "Galvanizing."
 - Welded wire reinforcement (WWR) may be used in lieu of conventional reinforcement for Type 1 barrier, and shall meet the requirements shown.

FOR CONTRACTORS INFORMATION ONLY

(TYPE 1)		APPROX. QUANTITIES 20 FT. SECTION	
CONCRETE	CY	2.6	
REINFORCING STEEL	LBS	330	
TOTAL BARRIER WT.	LBS	11000	



- (WWR) GENERAL NOTES**
- Deformed Welded Wire Reinforcement shall conform to ASTM A457.
 - Welded wire cage may be cut or bent, if necessary, but must be approved by the Engineer.
 - Combinations of reinforcing steel and WWR are permitted, as directed by the Engineer. The dimensions from the end of the barrier section to the first wire shall not exceed 3".
- REQUIRED (WWR) WIRE DESIGN**
- 8 - (#3) Horizontal Wires (Equally spaced)
 - 10 - (#20) Horizontal Wires (Equally spaced)
 - 29 - (#20) Vertical Wires (Spaced as shown in Elevation View)



Texas Department of Transportation
Design Division Standard

SHEET 1 OF 2

LOW PROFILE CONCRETE BARRIER PRECAST BARRIER (TYPE 1) LPCB-13

FILED	19/07/2010	BY	TJ2007	CHK	MM	DATE	19/07/2010
DESIGNED	19/07/2010	BY	MM	CHK	MM	DATE	19/07/2010
REVISED		BY		CHK		DATE	

SDPS
Houston Storm Drainage Program Support

PGAL
3131 BERRY PARK, SUITE 200
HOUSTON, TEXAS 77042
PHONE (713) 622-1444
FAX (713) 666-9333

iSani
3143 YELLOWSTONE BLVD.
HOUSTON, TX 77054
TEL (713) 747-2399
FAX (713) 748-3748

SURVEYED BY: LANTECH
PR NO.: P-5512E
2/24/2016

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

TRAFFIC CONTROL PLAN STANDARD LOW PROFILE CONCRETE BARRIER PRECAST BARRIER (TYPE 1)

TCP-69 OF 70 SHEET 4 OF 5

FOR CITY OF HOUSTON USE ONLY

55630

CITY OF HOUSTON PM
JEFFREY T. HALL, P.E.
SHEET NO. 252 OF 385

DATE: 2/24/2016 9:40 AM
DRAWING: C:\Users\jhall\My Documents\Traffic Control Plans\TCP-69\Sheet 4.dwg

TRAFFIC SIGNAL GENERAL NOTES:

1. ALL EQUIPMENT / MATERIALS AND CONSTRUCTION SHALL MEET OR EXCEED THE REQUIREMENTS CONTAINED IN THE CURRENT CITY OF HOUSTON STANDARD SPECIFICATIONS AND STANDARD DRAWINGS, THE PROJECT SPECIFIC SPECIFICATIONS AND THE PLANS.
2. ALL ELECTRICAL WORK SHALL BE IN CONFORMANCE WITH THE N.E.C. AS WELL AS THE PROVISIONS AND REQUIREMENTS OF THE CITY ELECTRICAL CODE.
3. ALL SIGNS SHALL BE MANUFACTURED IN ACCORDANCE WITH THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
4. THE CONTRACTOR SHALL ARRANGE THE INSTALLATION OF SIGNALS, POLES AND CONDUIT SO AS TO PERMIT THE CONTINUOUS MOVEMENT OF TRAFFIC IN ALL DIRECTIONS AT ALL TIMES. THE CONTRACTOR SHALL NOT CLOSE MORE THAN ONE LANE OF A ROADWAY AT ONE TIME WITHOUT PRIOR APPROVAL OF THE CITY.
5. THE CONTRACTOR SHALL CLEAN UP AND REMOVE FROM THE WORK AREA ALL LOOSE MATERIAL RESULTING FROM CONTRACT OPERATIONS EACH DAY PRIOR TO WORK BEING SUSPENDED FOR THAT DAY.
6. THE CONTRACTOR SHALL CONTACT CENTERPOINT ENERGY TO ARRANGE FOR METER AND ELECTRICAL SERVICE CONNECTION.
7. ALL PEDESTRIAN PUSH BUTTON ASSEMBLIES SHALL MEET ADA REQUIREMENTS. THE SIGNS THAT SHALL BE USED ARE IDENTIFIED IN THE TMDUC AS R10-3E.
8. OVERHEAD STREET NAME SIGNS SHALL BE INSTALLED SUCH THAT THE BOTTOM OF THE SIGN IS NO LESS THAN 17 FEET ABOVE THE ROADWAY PAVEMENT OR NO LESS THAN 16 FEET ABOVE THE FINISHED GRADE BEYOND THE SHOULDER.
9. THE LOCATION OF EACH NEW POLE FOUNDATION, PULL BOX, CONTROLLER CABINET FOUNDATION, UPS CABINET FOUNDATION AND ELECTRIC SERVICE PEDESTAL FOUNDATION SHALL BE MARKED IN THE FIELD AS SHOWN ON THE PLANS. THE EXACT LOCATION SHALL BE APPROVED BY THE ENGINEER AND/OR THE APPROVED CITY OF HOUSTON REPRESENTATIVE PRIOR TO BEGINNING INSTALLATION OF THE FOUNDATION.
10. THE TOP OF THE POLE FOUNDATION SHALL BE LEVEL WITH THE FINISHED GRADE. IF THE SLOPE OR SHOULDER DROPS OFF FROM FINISHED GRADE, THE CONTRACTOR SHALL GRADE AROUND POLE FOUNDATION. THE TOP OF THE FOUNDATION SHALL EXTEND NO MORE THAN 4 INCHES ABOVE SURROUNDING GRADE.
11. ALL CONCRETE USED FOR TRAFFIC SIGNAL POLE AND CABINET FOUNDATIONS SHALL BE CLASS "A" (REFER TO THE CITY OF HOUSTON SPECIFICATION FOR CONCRETE).
12. MAST ARM POLES SHALL NOT BE INSTALLED ON THE FOUNDATIONS LESS THAN SEVEN DAYS AFTER THE PLACEMENT OF THE CONCRETE FOR THE FOUNDATION.
13. ANCHOR BOLTS FOR SIGNAL POLES SHALL BE SET SO THAT TWO ARE IN COMPRESSION AND TWO ARE IN TENSION. PRIOR TO THE INSTALLATION OF THE NUT, THE THREADS OF THE ANCHOR BOLT SHALL BE COATED WITH PIPE JOINT COMPOUND.
14. ALL UNDERGROUND CONSTRUCTION (CONDUIT, FOUNDATIONS AND PULL BOXES) FOR THE INTERSECTION SHALL BE COMPLETED PRIOR TO THE INSTALLATION OF POLES, SIGNALS AND CABINETS. THE CONTRACTOR SHALL NOT PROCEED TO ABOVE GROUND WORK UNTIL THE ENGINEER AND/OR APPROVED CITY OF HOUSTON REPRESENTATIVE HAS CONFIRMED THAT THE MATERIALS FOR COMPLETE INSTALLATION ARE AVAILABLE.
15. UNDERGROUND CONDUIT FOR SIGNAL CABLE SHALL BE SCHEDULE 80 ELECTRICAL PVC CONDUIT OF THE DIAMETER SHOWN ON THE PLANS, UNLESS OTHERWISE NOTED. ALL COUPLINGS AND CONNECTIONS SHALL BE TIGHT AND WATERPROOF.
16. ALL ABOVE GROUND CONDUIT FOR SIGNAL CABLE AND INTERCONNECT MEDIA SHALL BE HOT DIPPED GALVANIZED STEEL RIGID METAL CONDUIT OF THE DIAMETERS SHOWN ON THE PLANS, UNLESS OTHERWISE NOTED. ALL COUPLINGS AND CONNECTIONS SHALL BE TIGHT AND WATERPROOF.
17. ONLY NEW CONDUIT AND CABLE SHALL BE INSTALLED.
18. CONDUIT INSTALLED UNDER EXISTING PAVED DRIVEWAYS, ROADWAYS OR SIDEWALKS, WHICH ARE NOT SCHEDULED TO BE RECONSTRUCTED AS PART OF THIS PROJECT, SHALL BE INSTALLED BY MEANS OF BORING. THE CONTRACTOR SHALL NOT CUT OPEN ANY STREET OR DRIVEWAY FOR CONDUIT INSTALLATION WITHOUT THE PRIOR APPROVAL OF THE ENGINEER AND/OR THE APPROVED CITY OF HOUSTON REPRESENTATIVE.
19. CONDUIT NOT PLACED UNDER PAVED DRIVEWAYS, ROADWAY PAVEMENT OR SIDEWALKS MAY BE PLACED BY CUTTING A TRENCH, INSTALLING THE CONDUIT AND BACKFILLING, ANY TRENCHING FOR CONDUIT WIDER THAN THREE (3) INCHES SHALL BE RESODDED.
20. PULL BOXES SHALL NOT BE INSTALLED WITHIN CONCRETE CURB ACCESS RAMPS. IN ADDITION, ANY PULL BOXES INSTALLED BEHIND CURBS SHALL BE INSTALLED BETWEEN THE CURB AND THE PROPOSED / FUTURE SIDEWALK OR BEYOND THE PROPOSED / FUTURE SIDEWALK. AN EXCEPTION TO THIS NOTE WOULD BE PULL BOXES INSTALLED IN A MEDIAN. ANY PULL BOXES INSTALLED ALONG AN UNCURBED ROADWAY SHALL BE INSTALLED ADJACENT TO, BUT NOT WITHIN, THE SHOULDER.
21. A 5/8 IN. X 10 FT. GROUND ROD SHALL BE INSTALLED IN THE PULL BOX LOCATED ON EACH CORNER. TWO GROUND ROD CLAMPS SHALL BE FURNISHED

FOR GROUNDING THE GROUND WIRE:

22. ALL CONDUITS SHALL BE CLEANED BY COMPRESSED AIR AND A PROPERLY SIZED CONDUIT PULLER OR MANUREL SHALL BE PULLED THROUGH THE CONDUIT PRIOR TO CABLE INSTALLATION.
23. WHEN PULLING TRAFFIC SIGNAL SYSTEM CABLES THROUGH CONDUIT, THE CABLES SHALL BE LUBRICATED WITH A LUBRICANT NORMALLY USED FOR THIS PURPOSE. ANY ABRASION TO ANY CONDUCTOR INSULATION WHICH OCCURS WHILE PULLING CABLE FOR THE TRAFFIC SIGNAL SYSTEM WILL BE CAUSE FOR THE IMMEDIATE REJECTION OF THE CABLE. IF THIS OCCURS, THE CONTRACTOR SHALL REMOVE AND REPLACE THE ENTIRE CABLE RUN AT THEIR EXPENSE.
24. A MINIMUM OF THREE (3) FEET OF EACH WIRE AND CABLE MEASURED FROM THE TOP OF THE PULL BOX SHALL BE LEFT IN EACH PULL BOX AND AT EACH POLE BASE.
25. ALL CABLES SHALL BE STRIPPED, FORMED AND TERMINATED IN A NEAT AND UNIFORM MANNER WHETHER IN THE SIGNAL HEAD OR CONTROLLER CABINET. ALL CABLE SHALL BE BROUGHT INTO THE TERMINAL HOUSING OF SIGNALS AND/OR CONTROLLER CABINETS AND A SUFFICIENT LENGTH OF CABLE SHALL BE LEFT SO THAT ALL TERMINAL CONNECTIONS MAY BE MADE WITHOUT THE NECESSITY OF SPLICING THE CABLE.
26. THE HIGH VOLTAGE CABLES SHOULD BE SEPARATED FROM THE LOW VOLTAGE CABLES AS MUCH AS POSSIBLE.
27. NO LOOP DETECTOR SHALL BE CUT IN A PARALLEL EXPANSION JOINT. SIGNS CUT ACROSS EXPANSION JOINTS SHALL HAVE A SLACK IN THE CABLE FOR EXPANSION.
28. ALL SAW CUT VEHICLE ROADWAY DETECTION LOOP CABLES SHALL BE #14 AWG IMSA 915-1985 CABLE. LEAD-IN CABLES SHALL BE #14 AWG IMSA 50-2-1984 CABLE. NO SPLICES SHALL BE ALLOWED IN THE ROADWAY DETECTION LOOP CABLE EXCEPT AT THE PULL BOX ADJACENT TO LOOP. THE DETECTOR LEAD-IN CABLE SHALL NOT BE SPLICED.
29. DETECTION LOOP SAW CUTS SHALL BE FLUSHED WITH WATER UNDER PRESSURE AND THEN DRIED WITH AIR UNDER PRESSURE.
30. ALL PRE-FORMED LOOP DETECTOR CABLES SHALL BE AS PER CITY OF HOUSTON SPECIFICATION.
31. WIRELESS MAGNETOMETER VEHICLE DETECTION SYSTEM SENSORS AND THE ASSOCIATED EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS STANDARDS AND SPECIFICATIONS.
32. THERE SHALL BE NO SPLICING IN CONDUCTORS EXCEPT FOR THE NECESSARY SPLICE BETWEEN ROADWAY LOOP WIRE AND DETECTOR LEAD-IN CABLE IN THE PULL BOX ADJACENT TO THE DETECTOR. THESE SPLICES SHALL BE WATERPROOF AND SHALL BE IN COMPLIANCE WITH THE CITY OF HOUSTON STANDARD DRAWINGS FOR TRAFFIC SIGNAL CONSTRUCTION. THESE SPLICES SHALL BE MADE BY THE CONTRACTOR. DO NOT GROUND THE CABLE SHIELD AT THE PULL BOX.
33. TWO #10 AWG-XHHW CONDUCTORS SHALL BE INSTALLED FROM EACH LUMINAIRE TO THE CONTROLLER CABINET, LEAVING THREE FEET OF SLACK FOR EACH CONDUCTOR (MEASURED FROM THE TOP OF THE PULL BOX) IN EACH PULL BOX. ROUTE FOUR CONDUCTORS TO THE LUMINAIRE WITH THE PHOTOELECTRIC CELL. AN IN-LINE FUSE SHALL BE INSTALLED FOR EACH LUMINAIRE IN THE ASSOCIATED PULL BOX.
34. THE EMERGENCY VEHICLE PREEMPTION SENSOR CABLE SHALL BE OPTICOM DETECTOR CABLE MODEL NO. 138. THE CABLE SHALL NOT BE SPLICED.
35. ALL VEHICLE AND PEDESTRIAN INDICATIONS SHALL BE LED.
36. THE CONTRACTOR SHALL MAINTAIN AND KEEP OPERATIONAL ALL INTELLIGENT TRANSPORTATION SYSTEMS (ITS) INFRASTRUCTURE DURING CONSTRUCTION. INFRASTRUCTURE INCLUDES, BUT NOT LIMITED TO, FIBER CABLE, COPPER ETHERNET SWITCHES, WIREM, BLUETOOTH, ETC. INTERRUPTION OF ITS OPERATIONS SHALL REQUIRE APPROVAL FROM THE CITY OF HOUSTON TRAFFIC OPERATIONS DIVISION / ITS SECTION AT A MINIMUM OF ONE WEEK IN ADVANCE. PLEASE CONTACT THE TRAFFIC OPERATIONS DIVISION / ITS SECTION FOR QUESTIONS AT (713- 881-3172).
37. THE CONTRACTOR SHALL BAG ALL NEWLY INSTALLED VEHICULAR AND/OR PEDESTRIAN TRAFFIC SIGNAL HEADS WITH BURLAP OR OTHER APPROVED MATERIAL UNTIL THE FINAL INSPECTION AND ACCEPTANCE BY THE CITY TRAFFIC ENGINEER AND/OR APPROVED CITY OF HOUSTON REPRESENTATIVE. THE BURLAP OR OTHER APPROVED MATERIAL/DEVICE SHALL COMPLETELY COVER THE TRAFFIC SIGNAL HEAD AND SHALL OBSCURE THE VIEW OF THE TRAFFIC SIGNAL INDICATIONS SO THAT THEY CANNOT BE SEEN UNTIL THE TRAFFIC SIGNAL IS PLACED IN OPERATION. DURING CONSTRUCTION, THE TRAFFIC SIGNAL WILL BE DE-ENERGIZED WHILE NOT IN USE FOR TESTING.
38. THE TRAFFIC SIGNAL OPERATION AT EXISTING SIGNALIZED INTERSECTIONS SHALL BE MAINTAINED BY THE CONTRACTOR THROUGHOUT THE DURATION OF THE PROJECT.
39. ALL STRIPING AND PAVEMENT MARKINGS ARE TO BE DONE UNDER THIS CONTRACT AND SHALL BE IN PLACE PRIOR TO THE ACTIVATION OF THE TRAFFIC SIGNAL. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL STOP LINES PRIOR TO THE INSTALLATION OF LOOP DETECTORS AND SENSOR DETECTORS.
40. ALL CONSTRUCTION SIGNING AND CONSTRUCTION TRAFFIC CONTROL DEVICES SHALL BE IN CONFORMANCE WITH THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

41. THE CONTRACTOR IS RESPONSIBLE FOR FURNISHING AND INSTALLING THE NECESSARY CONDUIT, CONDUIT RISER, WIRING, WEATHERHEAD AND ALL INCIDENTALS NECESSARY AS REQUIRED BY THE POWER COMPANY FOR ROUTING OF THE SERVICE CONDUCTORS FROM THE METERED PEDESTAL SERVICE TO THE CENTERPOINT ENERGY POINT OF SERVICE. NO EXTRA COMPENSATION WILL BE PROVIDED FOR THIS WORK. IT WILL BE CONSIDERED SUBSIDIARY TO VARIOUS BID ITEMS REQUIRED FOR INSTALLATION OF THE TRAFFIC SIGNAL. THE CONTRACTOR WILL BE RESPONSIBLE FOR VERIFYING THE LOCATION OF THE ELECTRIC SERVICE CONNECTION WITH THE POWER COMPANY.
42. FOR INSTALLATION OF THE GPS ANTENNA, SEE THE "GPS ANTENNA INSTALLATION DETAIL" ON STANDARD SHEETS.
43. THE CONTRACTOR SHALL LOCATE / EXPOSE ALL UTILITIES THAT MAY BE IN CONFLICT WITH SIGNAL POLE LOCATIONS BY HAND EXCAVATION PRIOR TO CONSTRUCTION. IF UTILITIES ARE IN CONFLICT THE ENGINEER WILL BE CONTACTED TO FIND AN ALTERNATE LOCATION FOR THE SIGNAL POLES.
44. THE MOUNTING LOCATION FOR THE UNINTERRUPTIBLE POWER SUPPLY UNIT ON THE CONTROLLER CABINET ASSEMBLY SHALL BE DETERMINED BY THE ENGINEER PRIOR TO INSTALLATION OF THE CABINET FOUNDATION.

RESPONSIBILITIES:

1. THE CONTRACTOR SHALL SUPPLY AND INSTALL THE FOLLOWING EQUIPMENT AND MATERIALS AS SPECIFIED IN THE PLANS: STEEL POLE ANCHOR BOLTS (WITH NUTS AND WASHERS), CONCRETE POLE FOUNDATIONS WITH REINFORCEMENT (WHERE SPECIFIED), TRAFFIC SIGNAL CONTROLLER CABINETS WITH CONTROLLERS AND ALL AUXILIARY EQUIPMENT, CONTROLLER CABINET CONCRETE FOUNDATIONS, CONCRETE PULL BOXES, ELECTRICAL CONDUIT, GROUND RODS AND CONNECTORS, BARE BOND WIRE AND ALL OTHER CONDUCTORS, POLES, MAST ARMS, TRAFFIC SIGNALS AND MOUNTING ASSEMBLIES, PEDESTRIAN SIGNALS AND MOUNTING ASSEMBLIES, PEDESTRIAN PUSH BUTTON STATIONS WITH SIGNS, LUMINAIRES, PHOTOCELLS, ELECTRIC SERVICE PEDESTALS AND CONCRETE FOUNDATIONS, VEHICLE DETECTION LOOPS, AND ALL OTHER APPURTENANCES NECESSARY FOR THE OPERATION OF THE TRAFFIC SIGNAL INSTALLATIONS, EXCEPT AS MODIFIED IN THE PLANS.
2. THE CONTRACTOR SHALL DELIVER THE CONTROLLER CABINETS WITH THE CONTROLLER(S) AND AUXILIARY EQUIPMENT SPECIFIED IN THE PLANS TO THE CITY OF HOUSTON TRAFFIC OPERATIONS CENTER, 2200 PATTERSON STREET FOR TESTING, A MINIMUM OF THREE WEEKS PRIOR TO THE INSTALLATIONS AT THE INTERSECTIONS. CONTACT THE SIGNAL SHOP ELECTRICAL SUPERVISOR (713-803-3033) AT LEAST 2 WORKING DAYS PRIOR TO THE DELIVERY OF THE CONTROLLER CABINETS TO THE CITY OF HOUSTON. THE CONTRACTOR SHALL PICK UP AND TRANSPORT THE CONTROLLER CABINETS FROM THE CITY OF HOUSTON TRAFFIC OPERATIONS CENTER TO THE INTERSECTIONS AFTER CITY OF HOUSTON STAFF HAS TESTED THE EQUIPMENT AND APPROVED IT FOR INSTALLATION.
3. THE CONTRACTOR SHALL INSTALL EACH TRAFFIC CONTROLLER CABINET ON ITS FOUNDATION AND ROUTE ALL OF THE CONDUCTORS INTO THE CONTROLLER CABINET. CONDUCTORS SHALL BE TERMINATED IN THE CABINET BY THE CONTRACTOR UNDER THE OBSERVATION OF AN APPROVED CITY OF HOUSTON REPRESENTATIVE.
4. THE CONTRACTOR SHALL PROVIDE THE CITY OF HOUSTON SIGNAL SHOP ELECTRICAL SUPERVISOR A LIST OF INTERSECTIONS SCHEDULED TO BE REBUILT PRIOR TO START OF CONSTRUCTION. THE CITY WILL EVALUATE THE EQUIPMENT AND DETERMINE WHICH ITEMS NEED TO BE RETURNED TO THE CITY OF HOUSTON SIGNAL SHOP. THE CONTRACTOR SHALL CAREFULLY DISASSEMBLE AND SALVAGE ALL EXISTING TRAFFIC SIGNAL AND STREET LIGHTING EQUIPMENT THAT IS NOT TO REMAIN OR BE RELOCATED. THE EQUIPMENT DEEMED SALVAGEABLE BY THE CITY OF HOUSTON WILL BE RETURNED TO THE CITY OF HOUSTON TRAFFIC OPERATIONS CENTER, 2200 PATTERSON STREET. THE EQUIPMENT SHALL BE UNLOADED BY THE CONTRACTOR. CONTACT THE CITY OF HOUSTON SIGNAL SHOP ELECTRICAL SUPERVISOR (713-803-3033) AT LEAST 2 WORKING DAYS PRIOR TO RETURNING THE EQUIPMENT. ALL REMAINING ITEMS NOT DEEMED SALVAGEABLE BY THE CITY OF HOUSTON WILL BE DISPOSED OF BY THE CONTRACTOR IN A LEGAL AND ACCEPTABLE MANNER.
5. THE CONTRACTOR SHALL SALVAGE AND REPLANT ANY LANDSCAPING VEGETATION THAT MAY BE DAMAGED BY CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL OBTAIN PRIOR APPROVAL FROM AN APPROVED CITY OF HOUSTON REPRESENTATIVE BEFORE ANY PLANTS ARE MOVED.
6. THE CONTRACTOR SHALL REPAIR/RESTORE ANY LANDSCAPE IRRIGATION COMPONENTS DAMAGED BY CONSTRUCTION ACTIVITY TO THEIR ORIGINAL CONDITION.
7. THE LOCATION OF PUBLIC AND PRIVATE UTILITIES IS SHOWN IN AN APPROXIMATE LOCATION ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATIONS BEFORE COMMENCING WORK. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES TO UTILITIES THAT ARE THE RESULT OF HIS FAILURE TO EXACTLY LOCATE AND PRESERVE UNDERGROUND FACILITIES.
8. THE CONTRACTOR IS RESPONSIBLE FOR ALL ELECTRICAL CONNECTIONS AND MONTHLY ELECTRICAL BILLS UNTIL THE CITY ACCEPTS THE TRAFFIC SIGNAL.
9. THE CONTRACTOR TO COORDINATE WITH CENTERPOINT ENERGY AND THE CITY OF HOUSTON TO DISCONNECT POWER TO EXISTING LUMINAIRES PRIOR TO REMOVAL OF THE EXISTING TRAFFIC SIGNAL POLES.
10. THE CONTRACTOR SHALL CONTACT THE CITY OF HOUSTON PARK-FORESTRY DEPARTMENT AT AT (832)-395-8459, MOBILE: 713-826-4428, EMAIL: DALE.TEMPLE@HOUSTONTX.GOV.

DATE: 9/24/2025 8:42:50 AM PROJECT: FV04A MARKET ST. IMPROVEMENTS RET-5630



PROJECT BENCHMARK DATA:
 CITY OF HOUSTON MONUMENT NO. 5260-B208,
 A TYPE A&B MARKER LOCATED ON THE
 NORTHEAST CORNER OF ALBA ROAD AND
 SUE BARNETT DRIVE. ELEVATION = 74.48'
 (NAD83) (COORD. 2011 ADL)

TO ARRANGE FOR LINES TO BE TURNED OFF OR
 MOVED, CALL CENTERPOINT AT 713-207-2222.

PRIVATE UTILITY LINES SHOWN
 AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.W. ON
 TAGMENTS CALL THE LONG STAFF NOTIFICATION 713-223-5467

N/A DATE: _____
DEVELOPER/UNDERGROUND FACILITIES VERIFICATION ONLY
 THIS SIGNATURE VERIFIES THAT YOU HAVE SHOWN CUP MATERIAL,
 USE LINES CORRECT & NOT TO BE USED FOR CONTACT
 VERIFICATIONS (USE SERVICE LINES ARE NOT SHOWN)
 SIGNATURE VALID FOR 30 MONTHS.

N/A DATE: _____
APPROVED FOR AT&T TRANSFER/ UNDERGROUND CONDUIT
 FACILITIES ON:
 SIGNATURE VALID FOR ONE YEAR

N/A DATE: _____
DEVELOPER/ UNDERGROUND ELECTRICAL FACILITIES
 VERIFICATION ONLY
 THIS SIGNATURE VERIFIES EXISTING UNDERGROUND FACILITIES
 NOT TO BE USED FOR CONTACT VERIFICATIONS
 SIGNATURE VALID FOR 30 MONTHS.

ETSI 5700 Hollister Road, Suite 220
 Houston, Texas 77056
 Tel: (713) 956-8601 Fax: (713) 956-8607
 Ergonomic Transportation Solutions, Inc.
 TEXAS REGISTERED ENGINEERING FIRM NO. 7-80929

PGAL JOHN HESS
 NO. 7-2752
 3111 DRAMMING, SUITE 200
 HOUSTON, TEXAS 77002
 Phone: (713) 622-1444
 Fax: (713) 668-9333
THE SEAL APPEARING ON THIS
 DOCUMENT WAS AUTHORIZED
 BY C. SANCHEZ, P.E. 60999
 9/24/2025

CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND
 SHEPHERD PARK (CENTRAL)
 DRAINAGE AND PAVING

**TRAFFIC SIGNAL
 GENERAL NOTES**

WSS NUMBER: M-000285-0001-4 FOR CITY OF HOUSTON USE ONLY
 DRAWING SCALE: NTS
 DATE: 9/24/2025
 CITY OF HOUSTON PM: 5630
 JEFFREY T. HALL, P.E.
 SHEET NO. 254 OF 385

R Y G

A, B, C, D, E, G, H

LEGEND

- EXISTING BASE MOUNTED CONTROLLER WITH CONCRETE APRON AND FOUNDATION TO BE REMOVED
- HORIZONTAL SIGNAL HEAD
- EXISTING STRAIN POLE TO BE REMOVED
- OVERHEAD SIGN
- EXISTING PEDESTRIAN PUSH BUTTON
- DIRECTION OF TRAFFIC FLOW
- EXISTING WIMAX ANTENNA
- EXISTING GROUND MOUNTED SIGN
- EXISTING LUMINAIRE



0 10 20 40
SCALE (IN FEET)



PROJECT BENCHMARK DATA:
CITY OF HOUSTON MONUMENT NO. 5260-B208, A TYPE AA MARK LOCATED ON THE NORTHEAST CORNER OF ALBA ROAD AND SUE BARNETT DRIVE. ELEVATION = 74.48' (NAVOD83/CORS 2011 ADJ.)

TO ARRANGE FOR LINES TO BE TURNED OFF OR MOVED, CALL CENTERPOINT AT 713-207-2222.
PRIVATE UTILITY LINES SHOWN

N/A DATE: _____
CENTERPOINT ENERGY/NATURAL GAS FACILITIES VERIFICATION ONLY. THIS SIGNATURE VERIFIES THAT YOU HAVE BROWN FOR MEXICO GAS LINES CORRECTLY. NOT TO BE USED FOR CONTACT VERIFICATION. GAS SERVICE LINES ARE NOT SHOWN. SIGNATURE VALID FOR SIX MONTHS.

N/A DATE: _____
APPROVED FOR AT&T TEXAS/WIRE UNDERGROUND CONDUIT FACILITIES ONLY. SIGNATURE VALID FOR ONE YEAR.

N/A DATE: _____
CENTERPOINT ENERGY/UNDERGROUND ELECTRICAL FACILITIES VERIFICATION ONLY. THIS SIGNATURE VERIFIES EXISTING UNDERGROUND FACILITIES. NOT TO BE USED FOR CONTACT VERIFICATION. SIGNATURE VALID FOR SIX MONTHS.

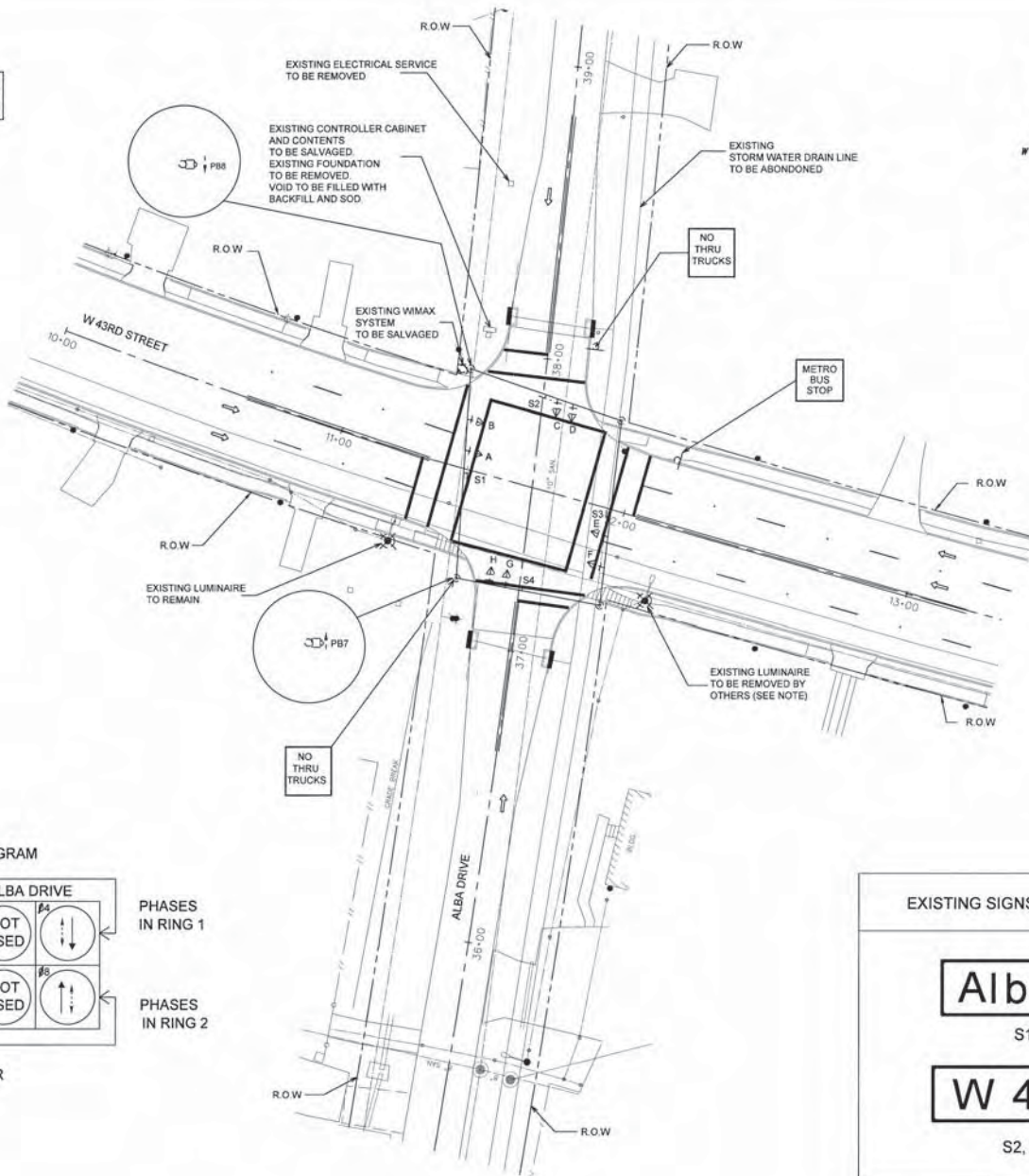
ETSI
Ergonomic Transportation Solutions, Inc.
TEXAS REGISTERED ENGINEERING FIRM NO. E - 008625

PGAL
3131 BRANIFF, SUITE 200
HOUSTON, TEXAS 77042
Phone: (713) 827-1444
Fax: (713) 988-9333
THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY C. SANCHEZ, P.E. 8/23/2015

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING
EXISTING TRAFFIC SIGNAL LAYOUT
ALBA DRIVE AT W 43RD STREET

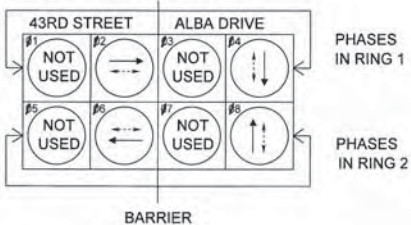
WBS NUMBER: M-000285-0001-4
DRAWING SCALE: T=40'
CITY OF HOUSTON PM: JEFFREY T. HALL, P.E.
SHEET NO. 255 OF 385

FOR CITY OF HOUSTON USE ONLY
55630



NOTE:
- CONTRACTOR SHALL CONTACT CENTER POINT ENERGY TEL: 713-207-4622 TO COORDINATE REMOVAL OF LUMINAIRE POLE.

PHASING DIAGRAM



DATE: 9/23/2015 3:39:09 PM IN: R:\P\5\ALBA\MARKETS\WORKING\SIGNLAYOUT_SG_ALBA.dwg

NOTE: CONTRACTOR SHALL INSTALL WIMAX ANTENNA ON POLE "L" ACCORDING TO THE CITY OF HOUSTON STANDARD SHEET TITLED: " TYPICAL WIMAX INSTALLATION DETAILS".

SPEED LIMITS:

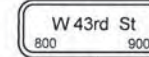
ALBA DRIVE = 30 MPH
W. 43RD STREET = 30 MPH



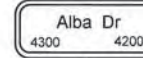
R10-12 (30" X 36")
S5, S6
S7, S8



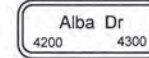
S1



S3



S4



S2



0 5 10 20
SCALE (IN FEET)



PROJECT BENCHMARK DATA:
CITY OF HOUSTON MONUMENT NO. 5260-8208, A TYPE 4A MARK LOCATED ON THE NORTHEAST CORNER OF ALBA ROAD AND SUE BARNETT DRIVE. ELEVATION = 74.48 (NAVD88/CORS 2011 ADJ.)

TO ARRANGE FOR LINES TO BE TURNED OFF OR MOVED, CALL CENTER/STAFF AT 713-201-2222 AT LEAST 48 HOURS BEFORE REPAIRS IN STREET R.O.W. OR EASMENTS CALL THE LONG STAFF NOTIFICATION 713-223-4567.

PRIVATE UTILITY LINES SHOWN
THIS SIGNATURE VERIFIES EXISTING UNDERGROUND FACILITIES ONLY. THIS SIGNATURE VERIFIES EXISTING UNDERGROUND FACILITIES NOT TO BE USED FOR CONFLICT VERIFICATION. SIGNATURE VALID FOR SIX MONTHS.

DATE: 11/14/2025
SIGNATURE: [Signature]
THIS SIGNATURE VERIFIES EXISTING UNDERGROUND CONDUIT FACILITIES ONLY. SIGNATURE VALID FOR ONE YEAR.

DATE: 11/14/2025
SIGNATURE: [Signature]
THIS SIGNATURE VERIFIES EXISTING UNDERGROUND FACILITIES NOT TO BE USED FOR CONFLICT VERIFICATION. SIGNATURE VALID FOR SIX MONTHS.

ETS I
3300 Hollister Road, Suite 220
Houston, Texas 77040
Tel: (713) 966-1001 Fax: (713) 966-6607
Ergonomic Transportation Solutions, Inc.
TEXAS REGISTERED ENGINEERING FIRM NO. E - 000625

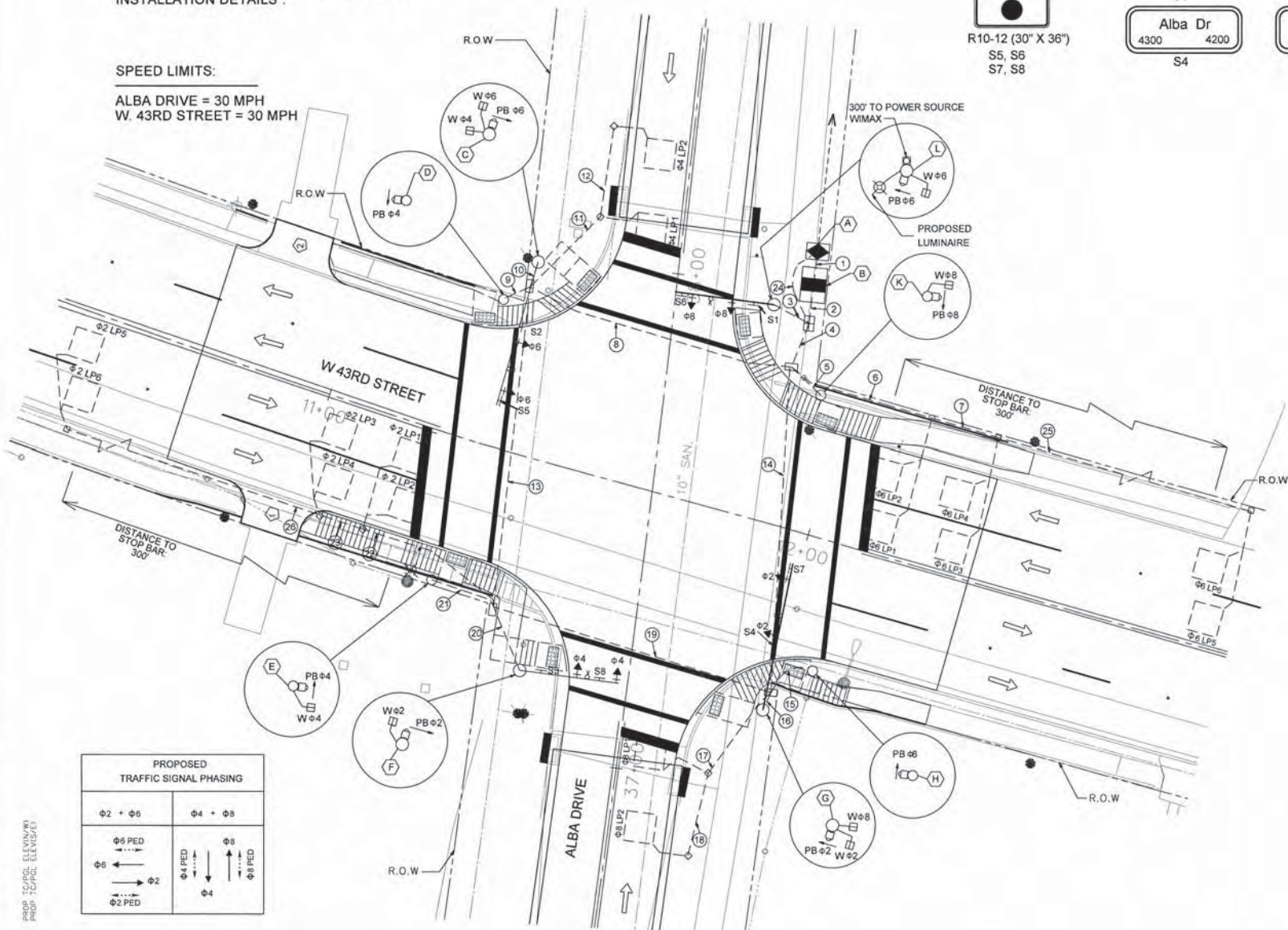
PGAL
ENGINEER
NO. E-2542
3315 BRADSHAW, SUITE 200
HOUSTON, TEXAS 77042
PHONE: (713) 822-1444
FAX: (713) 968-9333
THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY C. SANCHEZ, P.E. 6099 9/24/2005

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK(CENTRAL) DRAINAGE AND PAVING
PROPOSED TRAFFIC SIGNAL LAYOUT ALBA DRIVE AT W 43RD STREET

WBS NUMBER: M-000285-0001-4
DRAWING SCALE:
CITY OF HOUSTON PW
JEFFREY T. HALL, P.E.
SHEET NO. 256 OF 385

PROPOSED TRAFFIC SIGNAL PHASING	
$\phi 2 + \phi 6$ $\phi 6$ PED $\phi 2$ $\phi 2$ PED	$\phi 4 + \phi 8$ $\phi 8$ $\phi 4$ $\phi 8$ PED

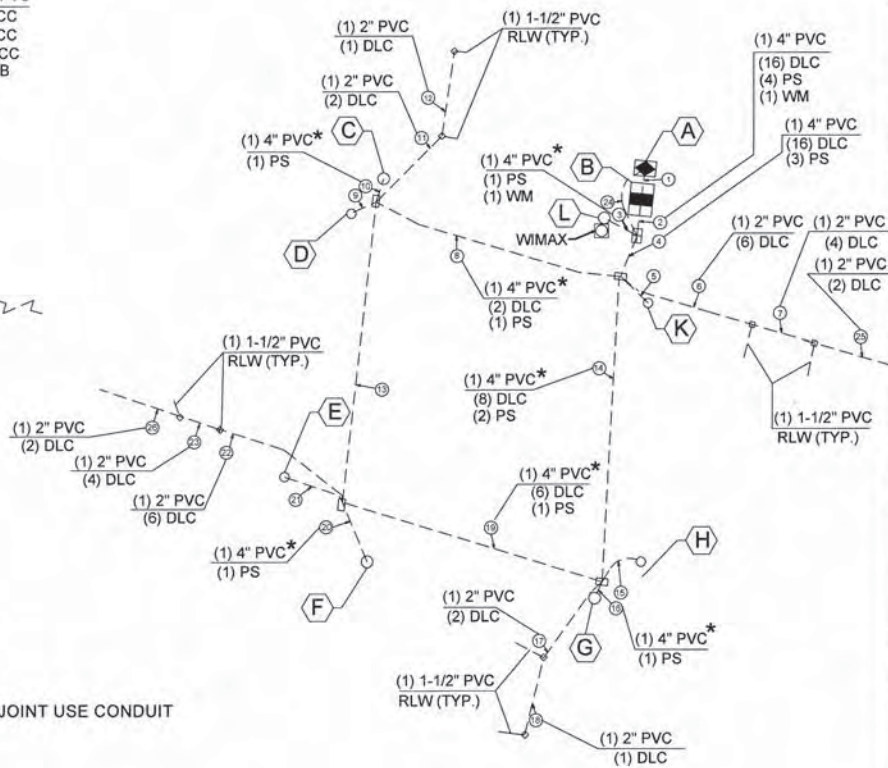
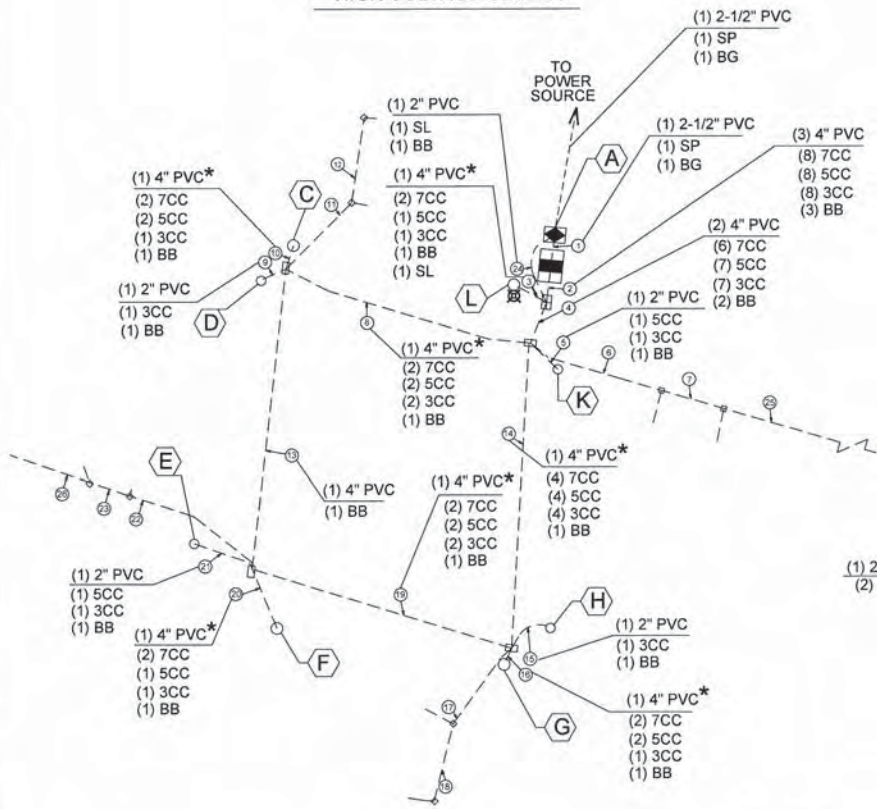


DATE: 9/24/2025 8:56:41 AM
PROJECT: GARDEN OAKS AND SHEPHERD PARK(CENTRAL) DRAINAGE AND PAVING
DRAWING: SDPS - HOUSTON STORM DRAINAGE PROGRAM SUPPORT
SHEET: 256 OF 385

DATE: 9/25/2025
 PROJECT: ALBA DRIVE
 DRAWING: CABLE SCHEMATIC
 SCALE: AS SHOWN
 SHEET: 257 OF 385

HIGH VOLTAGE CIRCUIT

LOW VOLTAGE CIRCUIT



LEGEND

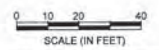
HIGH VOLTAGE CIRCUIT

- (X) Y" C = NUMBER, SIZE, AND TYPE OF CONDUIT
 - (X) = NUMBER OF CABLES (SIGNAL)
 - CC = 14 AWG SOLID CONDUCTOR CABLE
 - SL = #12 TRAY CABLE
 - BB = BARE BOND 8 AWG SOLID
 - BG = BARE GROUND, 4 AWG SOLID
 - SP = SIGNAL POWER, 6 AWG THW
- NOTE: SP SHALL CONSIST OF 6 #4 AWG THHN
 2 - WHITE
 1 - BLACK
 1 - RED
 2 - GREEN

LOW VOLTAGE CIRCUIT

- (X) Y" C = NUMBER, SIZE, AND TYPE OF CONDUIT
- DLC - DETECTOR LEAD-IN CABLE, 14 AWG (I.M.S.A. 50-2-1984)
- PS - PRE-EMPT SENSOR, OPTICOM, 20 3CC - SHIELDED CABLE (3M MODEL 138)
- RLW - ROADWAY LOOP DETECTOR WIRE, 14 AWG (I.M.S.A. 51-6-1985)
- WM = WMAX POWER CABLE, CASTSE 24 AWG

* HIGH/LOW VOLTAGE JOINT USE CONDUIT



PROJECT BENCHMARK DATA:
 CITY OF HOUSTON MONUMENT NO. 5260-8208,
 A TYPE 4A MARK LOCATED ON THE
 NORTHEAST CORNER OF ALBA ROAD AND
 SUE BARNETT DRIVE, ELEVATION = 74.48'
 (NAVD83/CORS, 2011 ADJ.)

TO ARRANGE FOR LINES TO BE TURNED OFF OR
 MOVED, CALL CENTERPOINT AT 713-207-2222.

PRIVATE UTILITY LINES SHOWN
 AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.W. OR
 EASEMENTS CALL THE LONG STAR NOTIFICATION 713-223-4567.

DATE: _____
 THIS SIGNATURE VERIFIES THAT YOU HAVE SHOWN AND NATURAL
 GAS LINES CORRECTLY TO BE USED FOR EXACT
 VERIFICATION (GAS SERVICE LINES ARE NOT SHOWN).
 SIGNATURE VALID FOR 36 MONTHS.

DATE: _____
 SIGNATURE FOR AIAI TEXAS/SWRI UNDERGROUND CONDUIT
 FACILITIES ONLY.
 SIGNATURE VALID FOR ONE YEAR.

DATE: _____
 CENTERPOINT ENERGY/UNDERGROUND ELECTRICAL FACILITIES
 VERIFICATION ONLY.
 THIS SIGNATURE VERIFIES EXISTING UNDERGROUND FACILITIES
 NOT TO BE USED FOR CONDUIT VERIFICATION.
 SIGNATURE VALID FOR 36 MONTHS.

ETSI
 Ergonomic Transportation Solutions, Inc.
 TEXAS REGISTERED ENGINEERING FIRM NO. F - 88882-25

PGAL
 THE SEAL APPEARING ON THIS
 DOCUMENT WAS AUTHORIZED
 BY C. SANCHEZ, P.E. 60919
 9/24/2025

CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND
 SHEPHERD PARK (CENTRAL)
 DRAINAGE AND PAVING

**PROPOSED
 CABLE SCHEMATIC
 ALBA DRIVE AT
 W 43RD STREET**

WBS NUMBER: M-000285-0001-4
 DRAWING SCALE: _____
 CITY OF HOUSTON PM: _____
 SHEET NO. 257 OF 385

FOR CITY OF HOUSTON
 USE ONLY
 55630

JEFFREY T. HALL, P.E.

POLE SCHEDULE

POLE NUMBER	POLE TYPE	MAST ARM		SIGNALS		LUMINAIRE TYPE	PED PB TYPE/SIGN	REMARKS	LOCATION*		STANDARDS
		SIGNAL	LUMINAIRE	MTG.	FACE				STATION	OFFSET	
C	TYPE 1	30'	N/A	2-ASTROBRAC 2-PED	2-H3 2-CDP	N/A	POLARA NAVIGATOR R10-3E (L)	- LEFT TURN YIELD SIGN - STREET NAME SIGN - PRE-EMP SENSOR	11+33.23	38.3' LT	02893-02 02893-03 02893-04A 02893-04B 02893-05 02893-09
D	5'	N/A	N/A	N/A	N/A	N/A	POLARA NAVIGATOR R10-3E (R)	N/A	11+28.58	29.0' LT	02893-02 02893-03 02893-06
E	15'	N/A	N/A	1-PED	1-CDP	N/A	POLARA NAVIGATOR R10-3E (R)	N/A	11+31.01	29.0' RT	02893-02 02893-03 02893-07
F	TYPE 1	20'	N/A	2-ASTROBRAC 1-PED	2-H3 1-CDP	N/A	POLARA NAVIGATOR R10-3E (L)	- LEFT TURN YIELD SIGN - STREET NAME SIGN - PRE-EMP SENSOR	11+51.48	41.8' RT	02893-02 02893-05 02893-04A 02893-04B 02893-05 02893-09
G	TYPE 1	30'	N/A	2-ASTROBRAC 2-PED	2-H3 2-CDP	N/A	POLARA NAVIGATOR R10-3E (L)	- LEFT TURN YIELD SIGN - STREET NAME SIGN - PRE-EMP SENSOR	12+0.6	36.22' RT	02893-02 02893-03 02893-04A 02893-04B 02893-05 02893-09
H	5'	N/A	N/A	N/A	N/A	N/A	POLARA NAVIGATOR R10-3E (L)	N/A	12+09.68	30.1' RT	02893-02 02893-03 02893-06
K	15'	N/A	N/A	1-PED	1-CDP	N/A	POLARA NAVIGATOR R10-3E (L)	N/A	11+94.95	27.62' LT	02893-02 02893-03 02893-04A 02893-04B 02893-07
L	TYPE 1	20'	15'	2-ASTROBRAC 1-PED	2-H3 1-CDP	250WHP5	POLARA NAVIGATOR R10-3E (L)	- LEFT TURN YIELD SIGN - STREET NAME SIGN - PRE-EMP SENSOR - WMAX	11+81.60	42.57' LT	02893-02 02893-03 02893-04A 02893-04B 02893-05 02893-09

* VALUE SHOWN IS APPROXIMATE. FINAL LOCATION SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.
STATIONS AND OFFSETS ARE FROM 43RD STREET CENTERLINE

STOP LINE AND LOOP DETECTOR LOCATIONS		
ITEM BY DIRECTION	STATION 43RD STREET	OFFSET
EASTBOUND		
STOP LINE @ GUTTER	11+26.09	21.83' RT
STOP LINE @ CENTERLINE	11+21.85	0.92' RT
PHASE 2-LP 1 LEADING EDGE	11+22.20	CENTERED IN LANE
PHASE 2-LP 2 LEADING EDGE	11+24.59	CENTERED IN LANE
PHASE 2-LP 3 LEADING EDGE	11+07.20	CENTERED IN LANE
PHASE 2-LP 4 LEADING EDGE	11+09.59	CENTERED IN LANE
PHASE 2-LP 5 LEADING EDGE	8+22.07	CENTERED IN LANE
PHASE 2-LP 6 LEADING EDGE	8+24.07	CENTERED IN LANE
WESTBOUND		
STOP LINE @ GUTTER	12+06.95	20.83' LT
STOP LINE @ CENTERLINE	12+10.28	1.16' LT
PHASE 6-LP 1 LEADING EDGE	12+10.43	CENTERED IN LANE
PHASE 6-LP 2 LEADING EDGE	12+08.30	CENTERED IN LANE
PHASE 6-LP 3 LEADING EDGE	12+25.43	CENTERED IN LANE
PHASE 6-LP 4 LEADING EDGE	12+23.30	CENTERED IN LANE
PHASE 6-LP 5 LEADING EDGE	15+10.73	CENTERED IN LANE
PHASE 6-LP 6 LEADING EDGE	15+08.98	CENTERED IN LANE
STATION ALBA DRIVE		
NORTHBOUND		
STOP LINE @ GUTTER	37+06.29	13.8' RT
STOP LINE @ CENTERLINE	37+08.41	0
PHASE 8-LP 1 LEADING EDGE	37+06.82	CENTERED IN LANE
PHASE 8-LP 2 LEADING EDGE	36+91.82	CENTERED IN LANE
SOUTHBOUND		
STOP LINE @ GUTTER	38+05.80	13.9' LT
STOP LINE @ CENTERLINE	38+03.22	0
PHASE 4-LP 1 LEADING EDGE	38+05.34	CENTERED IN LANE
PHASE 4-LP 2 LEADING EDGE	38+20.34	CENTERED IN LANE

TRAFFIC SIGNAL CONTROLLER							
CABINET	TYPE	CONTROLLER	AUX. CONTROL	REMARKS	LOCATION*		STANDARDS
					STATION	OFFSET	
A	UL TYPE 3R	METERED SERVICE PEDESTAL WITH TWO SINGLE POLE 30/60 AMP CIRCUIT BREAKERS			38+0.74	27.19' RT	2893-14
B	340 ITS	207L WITH GPS SERIAL COMMUNICATION MODULE, UNINTERRUPTIBLE POWER SUPPLY UNIT (UPS) & WMAX	THREE POLE STREET LIGHTING CONTACTOR	STANDARD SPECIFICATION 16730, 16731, 16732, 16733, 16734 & 16785	38+7.48	27.30' RT	02893-10C

* VALUE SHOWN IS APPROXIMATE. FINAL LOCATION SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.
STATIONS AND OFFSETS ARE FROM ALBA ROAD CENTERLINE



PROJECT BENCHMARK DATA:
CITY OF HOUSTON MONUMENT NO. 5260-8208, A TYPE 4A MARK LOCATED ON THE NORTHEAST CORNER OF ALBA ROAD AND SUE BARNETT DRIVE. ELEVATION = 74.48' (NAVD85 PCDS 2011 ADJ3)
TO ARRANGE FOR LINES TO BE TURNED OFF OR MOVED, CALL CENTERPOINT AT 713-207-2222.
PRIVATE UTILITY LINES SHOWN AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.W. OR FACEDMENTS CALL THE LONG STAFF NOTIFICATION 713-224-4567.

DATE: _____
SIGNATURE: _____
FOR AT&T TRANSWAVE UNDERGROUND CONDUIT FACILITIES ONLY.
SIGNATURE VALID FOR ONE YEAR.

DATE: _____
SIGNATURE: _____
FOR AT&T TRANSWAVE UNDERGROUND CONDUIT FACILITIES ONLY.
SIGNATURE VALID FOR ONE YEAR.

DATE: _____
SIGNATURE: _____
FOR AT&T TRANSWAVE UNDERGROUND CONDUIT FACILITIES ONLY.
SIGNATURE VALID FOR ONE YEAR.

ETSII
5300 Hollister Road, Suite 220
Houston, Texas 77056
Tel: (713) 956-8663 Fax: (713) 956-8667
Ergonomic Transportation Solutions, Inc.
TEXAS REGISTERED ENGINEERING FIRM NO. E - 808252

PGAL
1301 F-2942
3131 BRANIFF, SUITE 200
Houston, Texas 77042
Phone: (713) 822-1444
Fax: (713) 868-9333
THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY C. SANCHEZ, P.E. 60919 8/24/2015

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING PROPOSED POLES AND LOOP DETECTORS SCHEDULE ALBA DRIVE AT W 43RD STREET

WDS NUMBER: M-000285-0001-4
DRAWING SCALE: _____
CITY OF HOUSTON, TX
JEFFREY T. HALL, P.E.
SHEET NO. 258 OF 385

DATE: 9/24/2015 8:40:45 AM BOARD: M ANDREYEVNA MUMFITS: UNAPPROVED SIGNAL: SIGNAL_NUM: 41 SCALE: 20:1

PROP: TC/PC/ELEV(N)/R/ PROP: TC/PC/ELEV(S)/E/

55630

LEGEND

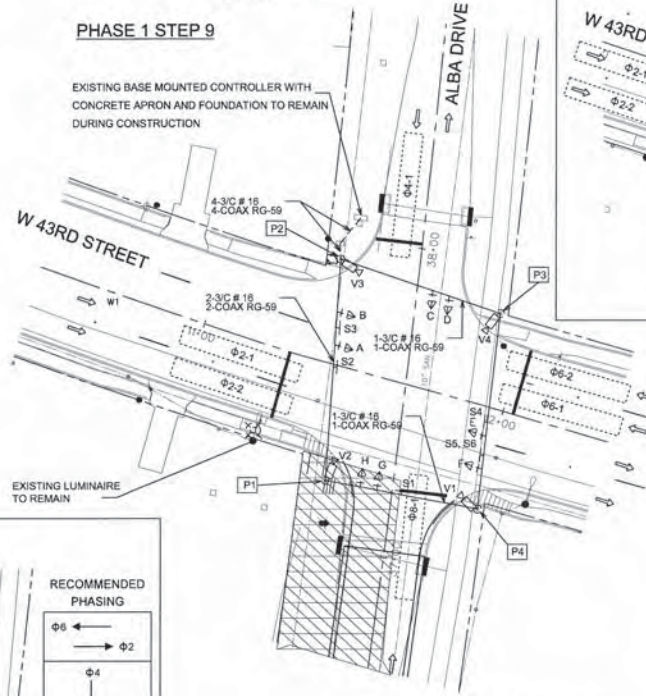
- PHASE 1 STEP 9
- PHASE 1 STEP 11A
- PHASE 1 STEP 11B
- PHASE 1 STEP 12
- TEMPORARY PUL BOX (TYPE B)
- HORIZONTAL SIGNAL HEAD
- EXISTING STRAIN POLE
- TEMPORARY OVERHEAD SIGN
- DIRECTION OF TRAFFIC FLOW
- EXISTING WIMAX ANTENNA
- TEMPORARY VIVID CAMERA
- DETECTION ZONE



- S1 - DURING PHASE 1 STEPS 9 AND 11A.
 - S3 - DURING PHASE 1 STEPS 9 AND 11A.
 - S5 - DURING PHASE 1 STEP 11B.
 - S6 - DURING PHASE 1 STEPS 9 AND 11A.

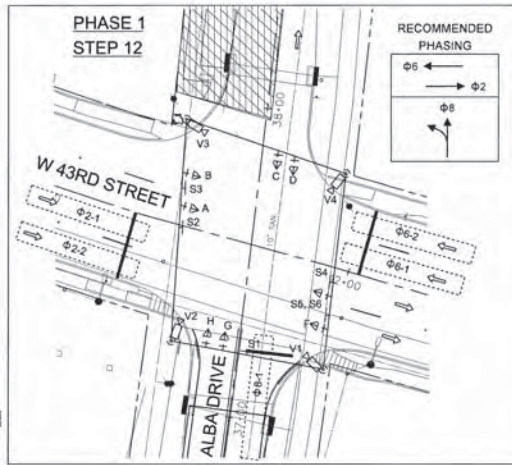
PHASE 1 STEP 9

EXISTING BASE MOUNTED CONTROLLER WITH CONCRETE APRON AND FOUNDATION TO REMAIN DURING CONSTRUCTION



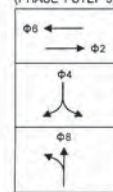
PHASE 1 STEP 12

RECOMMENDED PHASING

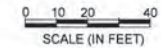


(H AND G TO BE COVERED DURING PHASE 1 STEPS 11B AND 12.)

RECOMMENDED PHASING (PHASE 1 STEP 9)

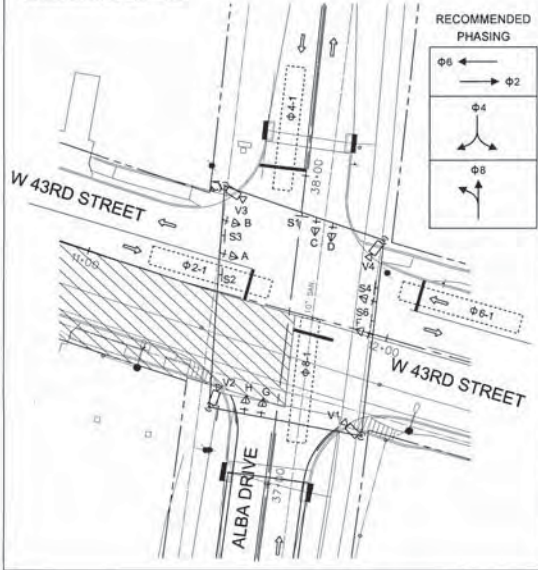


PHASE	CAMERA	DETECTION ZONE
2	V1	EBL AND EBT
4	V2	SBL AND SBT (ALL STEPS BUT STEP 11B AND 12)
6	V3	WBL AND WBT
8	V4	NBL AND NBT



PHASE 1 STEP 11A

RECOMMENDED PHASING



TEMPORARY TRAFFIC SIGNAL HARDWARE TO BE FURNISHED, INSTALLED & MAINTAINED BY THE CONTRACTOR DURING ALL PHASE(S) AND / OR STEPS(S) OF CONSTRUCTION

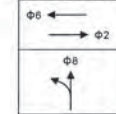
ITEM *	UNIT	QUANTITY *
VIVDS CAMERA	EA	4
COAXIAL (RG 59)	LF	200
3/C - # 16 CABLE (VIVDS POWER)	LF	200
TEMPORARY PULL BOX (TYPE B)	EA	1
2" CONDUIT	LF	20
TEMPORARY SIGN	EA	6

* NOT FOR BIDDING PURPOSES. FOR CONTRACTOR'S INFORMATION ONLY.

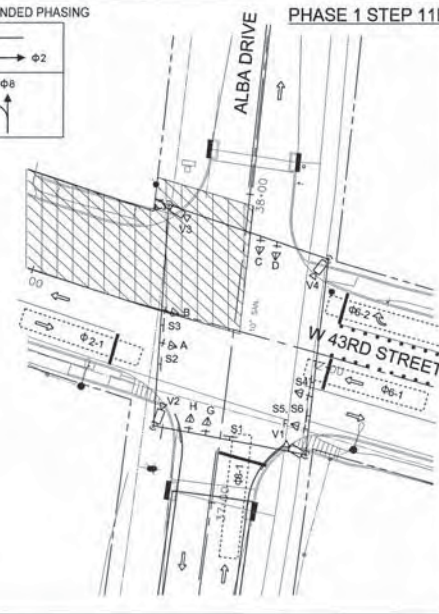
NOTES:

- USE THE EXISTING STRAIN POLES, SIGNAL HEADS AND SPAN WIRE AS SHOWN IN THIS LAYOUT.
- SET CAMERAS TO DETECTION ZONES AS SHOWN ON THIS LAYOUT. SET CONTROLLER TO ACTUATED MODE AS SHOWN IN THE PHASING SEQUENCE. PHASING AND TIMING MAY BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE CITY OF HOUSTON ENGINEER.
- VIVDS CAMERA(S) MOUNTED ON STRAIN POLES SHALL BE USED TO DETECT VEHICLES DURING THE VARIOUS PHASES/STEPS OF CONSTRUCTION.
- THE POSITION OF SIGNAL HEADS IS SHOWN FOR PHASE 1 STEP 9 AND SHOULD BE ADJUSTED TO FACE THE APPROACHING TRAFFIC, AS NECESSARY FOR OTHER PHASES/STEPS.
- THE VIVDS DETECTION SYSTEM SHALL BE REMOVED AFTER CONSTRUCTION. ALL MATERIALS AND LABOR TO INSTALL THE VIVDS SYSTEM ARE INCIDENTAL TO THE TEMPORARY SIGNAL CONSTRUCTION.

RECOMMENDED PHASING



PHASE 1 STEP 11B



PROJECT BENCHMARK DATA:
 CITY OF HOUSTON MONUMENT NO. 5260-B208, A TYPE 4A MARK LOCATED ON THE NORTHEAST CORNER OF ALBA ROAD AND SUE BARNETT DRIVE, ELEVATION = 74.48' (NAD83/CORS 2011 ADJ.)

TO AVOID FOR LINES TO BE TURNED OFF OR MOVED, CALL CENTERPOINT AT 713-207-2222.
 PRIVATE UTILITY LINES SHOWN AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.M. OR PARALLELS CALL THE LOW STAK NOTIFICATION 713-233-4567.

DATE: *N/A*
 SIGNATURE: *N/A*
 VERIFICATION ONLY. THIS SIGNATURE VERIFIES EXISTING UNDERGROUND FACILITIES NOT TO BE USED FOR CONFLICT. SIGNATURE VALID FOR SIX MONTHS.

DATE: *N/A*
 SIGNATURE: *N/A*
 APPROVED FOR AT&T LEAD/SWIT UNDERGROUND CONDUIT FACILITIES ONLY. SIGNATURE VALID FOR ONE YEAR.

DATE: *N/A*
 SIGNATURE: *N/A*
 VERIFICATION ONLY. THIS SIGNATURE VERIFIES EXISTING UNDERGROUND FACILITIES NOT TO BE USED FOR CONFLICT. SIGNATURE VALID FOR SIX MONTHS.

ETSI
 Ergonomic Transportation Solutions, Inc.
 TEXAS REGISTERED ENGINEERING FIRM NO. E-000025

PGAL
 3131 SPRINGDALE SUITE 200
 HOUSTON, TEXAS 77042
 Phone (713) 672-1444
 Fax (713) 668-9533

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY C. SANCHEZ, P.E. 80019 6/23/2015

CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

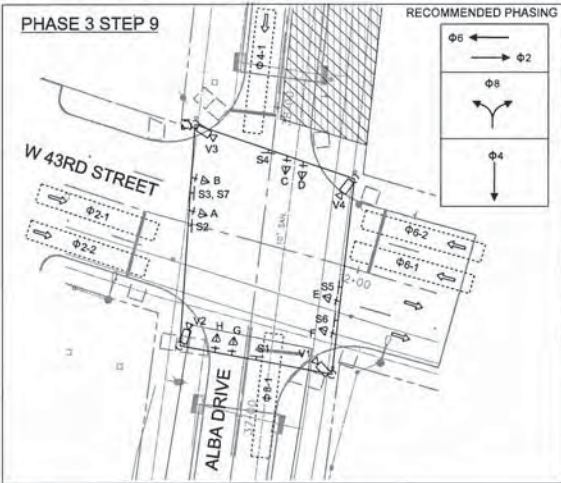
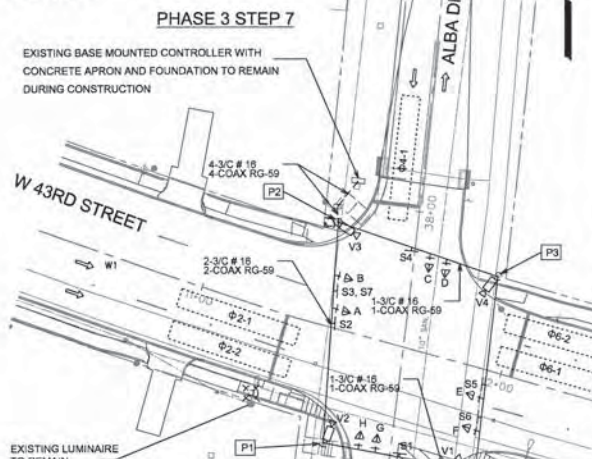
GARDEN OAKS AND SHEPHERD PARK(CENTRAL) DRAINAGE AND PAVING TEMPORARY TRAFFIC SIGNAL LAYOUT ALBA DRIVE AT W 43RD STREET PHASE 1 STEPS 9, 11A, 11B AND 12

WBS NUMBER FOR CITY OF HOUSTON: M-000285-0001-4
 DRAWING SCALE: 1"=40'
 CITY OF HOUSTON, PM: JEFFREY T. HALL, P.E.
 SHEET NO. 259 OF 385

LEGEND

- PHASE 3 STEP 7
- PHASE 3 STEP 8A
- PHASE 3 STEP 8B
- PHASE 3 STEP 9
- TEMPORARY PUL BOX (TYPE B)
- HORIZONTAL SIGNAL HEAD
- EXISTING STRAIN POLE
- TEMPORARY OVERHEAD SIGN
- DIRECTION OF TRAFFIC FLOW
- EXISTING WIMAX ANTENNA
- TEMPORARY VIVID CAMERA
- DETECTION ZONE

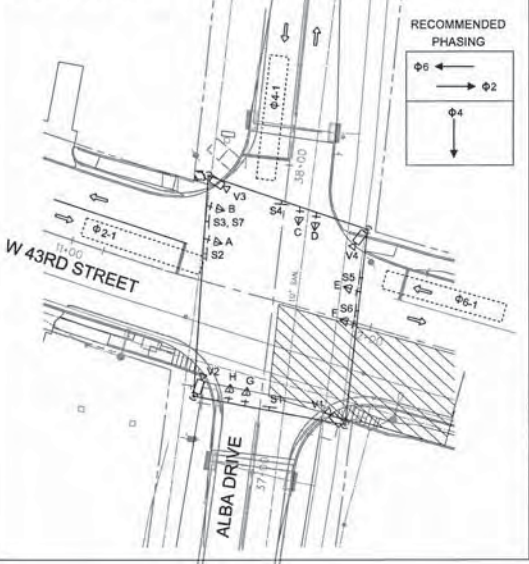
- R3-2
24"x24"
- R3-8C
30"x30"
- R3-1
24"x24"
- S1 - DURING PHASE 3 STEPS 8A AND 8B.
- S3 - DURING PHASE 3 STEP 8A
- S6 - DURING PHASE 3 STEPS 8B AND 9.
- S4 - DURING PHASE 3 STEPS 8B AND 9.
- S7 - DURING PHASE 3 STEP 9.



PHASE	CAMERA	DETECTION ZONE
2	V1	EBL AND EBT
4	V2	SBL AND SBT
6	V3	WBL AND WBT
8	V4	NBL AND NBT (ALL STEPS BUT STEPS 7 AND 8A)

0 10 20 40
SCALE (IN FEET)

PHASE 3 STEP 8A



TEMPORARY TRAFFIC SIGNAL HARDWARE TO BE FURNISHED, INSTALLED & MAINTAINED BY THE CONTRACTOR DURING ALL PHASE(S) AND / OR STEP(S) OF CONSTRUCTION

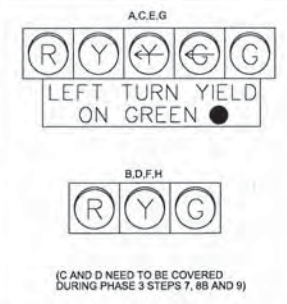
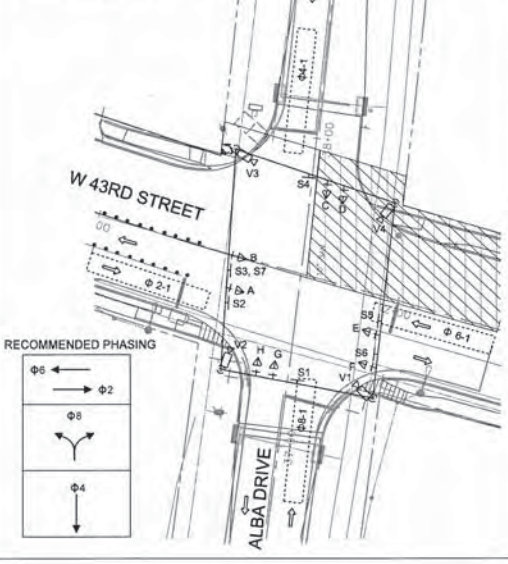
ITEM ^x	UNIT	QUANTITY ^x
VIVDS CAMERA	EA	4
COAXIAL (RG 59)	LF	200
3/C - # 16 CABLE (VIVDS POWER)	LF	200
TEMPORARY PULL BOX (TYPE B)	EA	1
2" CONDUIT	LF	20
TEMPORARY SIGN	EA	11

^x NOT FOR BIDDING PURPOSES. FOR CONTRACTOR'S INFORMATION ONLY.

NOTES:

1. USE THE EXISTING STRAIN POLES, SIGNAL HEADS AND SPAN WIRE AS SHOWN IN THIS LAYOUT.
2. SET CAMERAS TO DETECTION ZONES AS SHOWN ON THIS LAYOUT. SET CONTROLLER TO ACTUATED MODE AS SHOWN IN THE PHASING SEQUENCE. PHASING AND TIMING MAY BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE CITY OF HOUSTON ENGINEER.
3. VIVDS CAMERA(S) MOUNTED ON STRAIN POLES SHALL BE USED TO DETECT VEHICLES DURING THE VARIOUS PHASES/STEPS OF CONSTRUCTION.
4. THE POSITION OF SIGNAL HEADS IS SHOWN FOR PHASE 3 STEP 7 AND SHOULD BE ADJUSTED TO FACE THE APPROACHING TRAFFIC, AS NECESSARY FOR OTHER PHASES/STEPS.
5. THE VIVDS DETECTION SYSTEM SHALL BE REMOVED AFTER CONSTRUCTION. ALL MATERIALS AND LABOR TO INSTALL THE VIVDS SYSTEM ARE INCIDENTAL TO THE TEMPORARY SIGNAL CONSTRUCTION.

PHASE 3 STEP 8B



(C AND D NEED TO BE COVERED DURING PHASE 3 STEPS 7, 8B AND 9)



PROJECT BENCHMARK DATA:
CITY OF HOUSTON MONUMENT NO. 5260-820B.
A TYPE 4A MARK LOCATED ON THE NORTHEAST CORNER OF ALBA ROAD AND SUE BARNETT DRIVE. ELEVATION = 74.48'
LINALOOS/CORNS 2011 A3.2.3

TO ARRANGE FOR LINES TO BE TURNED OFF OR MOVED, CALL CENTERPOINT AT 713-207-2222.

PRIVATE UTILITY LINES SHOWN AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.W. OR EASEMENTS CALL THE LONG STAFF NOTIFICATION 713-223-4567.

N/A DATE: _____
CENTERPOINT ENERGY/GAS FACILITIES VERIFICATION ONLY. THIS SIGNATURE VERIFIES THAT YOU HAVE SHOWN ON NATURAL GAS LINES CORRECTLY NOT TO BE USED FOR CONTACT VERIFICATION (GAS SERVICE LINES ARE NOT SHOWN). SIGNATURE VALID FOR SIX MONTHS.

N/A DATE: _____
CENTERPOINT ENERGY/UNDERGROUND CONDUIT FACILITIES ONLY. SIGNATURE VALID FOR ONE YEAR.

N/M DATE: _____
CENTERPOINT ENERGY/UNDERGROUND ELECTRICAL FACILITIES VERIFICATION ONLY. THIS SIGNATURE VERIFIES EXISTING UNDERGROUND FACILITIES NOT TO BE USED FOR CONTACT VERIFICATION. SIGNATURE VALID FOR SIX MONTHS.

ETSI 5300 Hollister Road, Suite 220
Houston, Texas 77069
Tel: (713) 956-9661 Fax: (713) 956-9667
Ergonomic Transportation Solutions, Inc.
TEXAS REGISTERED ENGINEERING #1994 NO. E - 006625

PGAL THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY C. SAM CONNORS, P.E. 60599
9/23/2005

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

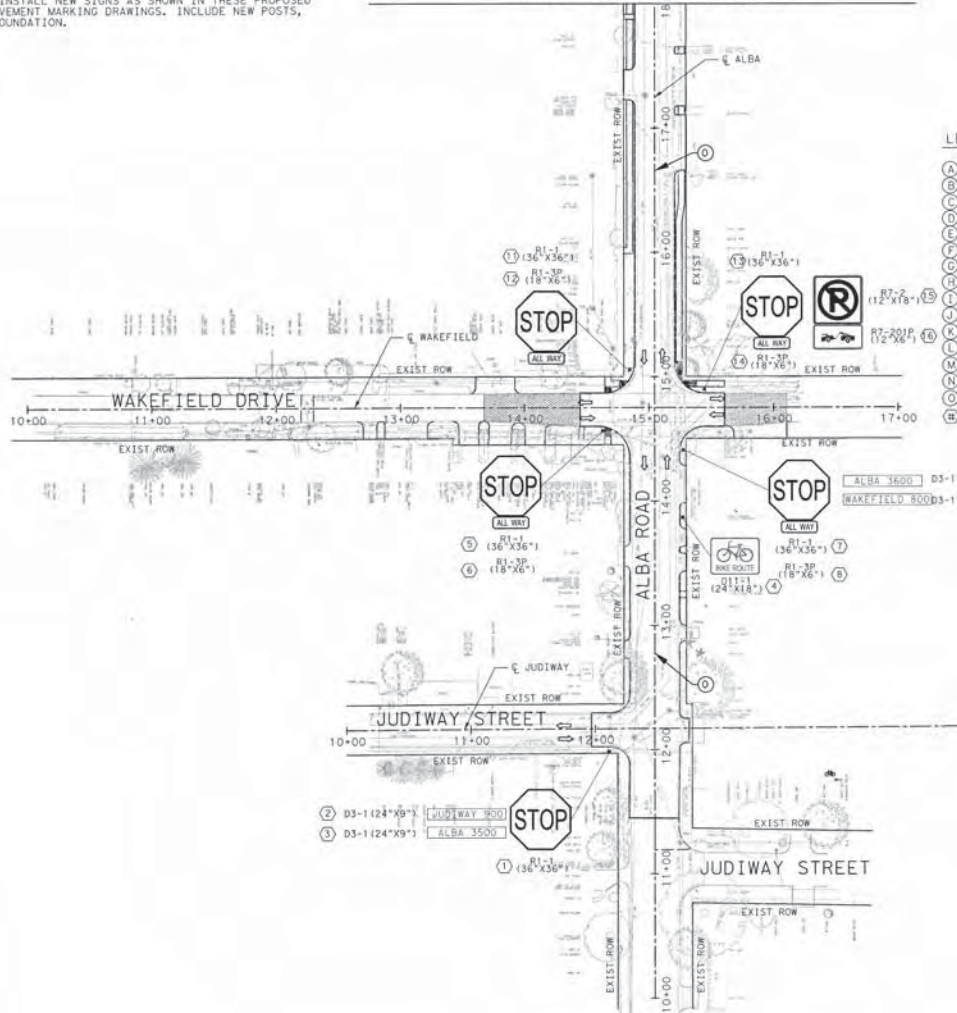
GARDEN OAKS AND SHEPHERD PARK(ING) DRAINAGE AND PAVING TEMPORARY TRAFFIC SIGNAL LAYOUT ALBA DRIVE AT W 43RD STREET PHASE 3 STEPS 7, 8A, 8B AND 9

WBS NUMBER M-000285-0001-4
DRAWING SCALE

CITY OF HOUSTON PW
JEFFREY T. HALL, P.E.
SHEET NO. 260 OF 345

NOTE:
 1. EXISTING SPECIAL GUIDE/INFORMATION SIGNS, METRO SIGNS AND OTHER PUBLIC/PRIVATE ENTITY SIGNS ARE NOT SHOWN IN THESE PROPOSED SIGNING AND PAVEMENT MARKING DRAWINGS. HOWEVER, THOSE SIGNS SHALL BE PROTECTED/SALVAGED DURING CONSTRUCTION AND/OR REMOVED AND RELOCATED/RE-INSTALLED AT OR NEAR THE ORIGINAL LOCATION AFTER THE PAVEMENT CONSTRUCTION IS COMPLETE. PAYMENT WILL BE MADE FOR THIS WORK, WHICH INVOLVES NEW FOUNDATION, POSTS AND HARDWARE.
 2. REPLACE AND INSTALL NEW SIGNS AS SHOWN IN THESE PROPOSED SIGNING AND PAVEMENT MARKING DRAWINGS. INCLUDE NEW POSTS, HARDWARE AND FOUNDATION.

MATCH LINE STA 18+00.00



LEGEND

- (A) THERMOPLAST PAV MRK (W) (4") (SLD)
- (B) THERMOPLAST PAV MRK (W) (4") (BRK)
- (C) THERMOPLAST PAV MRK (W) (12") (SLD)
- (D) THERMOPLAST PAV MRK (W) (24") (SLD) (STOP BAR)
- (E) THERMOPLAST PAV MRK (W) (24") (SLD) (CONTINENTAL X-WALK)
- (F) THERMOPLAST PAV MRK (Y) (24") (SLD) (CROSSHATCH)
- (G) THERMOPLAST PAV MRK (W) (8") (SLD)
- (H) RAIS REFL PAV MRKR (DOUBLE-SIDED) (TY II-C-R)
- (I) THERMOPLAST PAV MRK (TURNING ARROW)
- (J) THERMOPLAST PAV MRK (ELONGATED WORD ONLY)
- (K) RAIS REFL PAV MRKR (DOUBLE-SIDED) (TY II-A-A)
- (L) THERMOPLAST PAV MRK (Y) (4") (SLD)
- (M) THERMOPLAST PAV MRK (W) (4") (CAT-TRACKS)
- (N) THERMOPLAST PAV MRK (DIAMOND SYMBOL)
- (O) THERMOPLAST PAV MRK (Y) (4") (BRK)
- (P) SMALL SIGN NUMBER

- [Symbol] LARGE SIGN NUMBER
- [Symbol] PAVEMENT MARKING ARROW
- [Symbol] DIRECTION OF TRAFFIC/TRAVEL LANE
- [Symbol] ONLY PAVEMENT MARKING WORD
- [Symbol] SMALL SIGN
- [Symbol] LARGE SIGN
- [Symbol] TY 3 OBJECT MARKER (OM-3L) (12"x36")
- [Symbol] TY 3 OBJECT MARKER (OM-3R) (12"x36")

NOTES

1. FOR HORIZONTAL ALIGNMENT DATA, SEE GEOMETRIC DATA SUMMARY.
2. PAVEMENT CALLOUTS ARE TO FACE OF CURB UNLESS NOTED OTHERWISE.
3. PAVEMENT MARKINGS AND SIGNING SHALL BE INSTALLED IN ACCORDANCE WITH CITY OF HOUSTON (COH) TRAFFIC MANAGEMENT AND MAINTENANCE DIVISION'S PAVEMENT MARKINGS AND SIGNING DETAILS (3700 SERIES), MUTCD STANDARDS AND SPECIFICATIONS.
4. PERMANENT PAVEMENT MARKINGS SHALL BE THERMOPLASTIC MATERIAL PER THE CITY OF HOUSTON SPECIFICATIONS.
5. WATCH CROSS STREET PAVEMENT MARKINGS AND SIGNING UNLESS NOTED OTHERWISE.
6. THE LOCATION OF THE SIGNS AS SHOWN ON THESE PLANS IS APPROXIMATE. IF THERE IS ANY CONFLICT WITH UTILITIES, DRAINAGE ELEMENTS, POWER OR STREET LIGHT POLES OR ANY OTHER PHYSICAL FEATURES, THE NEW SIGN LOCATION WILL BE AS DIRECTED BY THE ENGINEER.
7. SEE CITY OF HOUSTON STANDARDS PMD-2 THRU PMD-7 FOR TYPICAL DIMENSIONS AND DETAILS



SDPS
Houston Storm Drainage Program Support

PGAL
TYPE REG. NO. F-2742
3131 BROADWAY, SUITE 200
HOUSTON, TEXAS 77042
PHONE (713) 822-1444
FAX (713) 968-9333

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

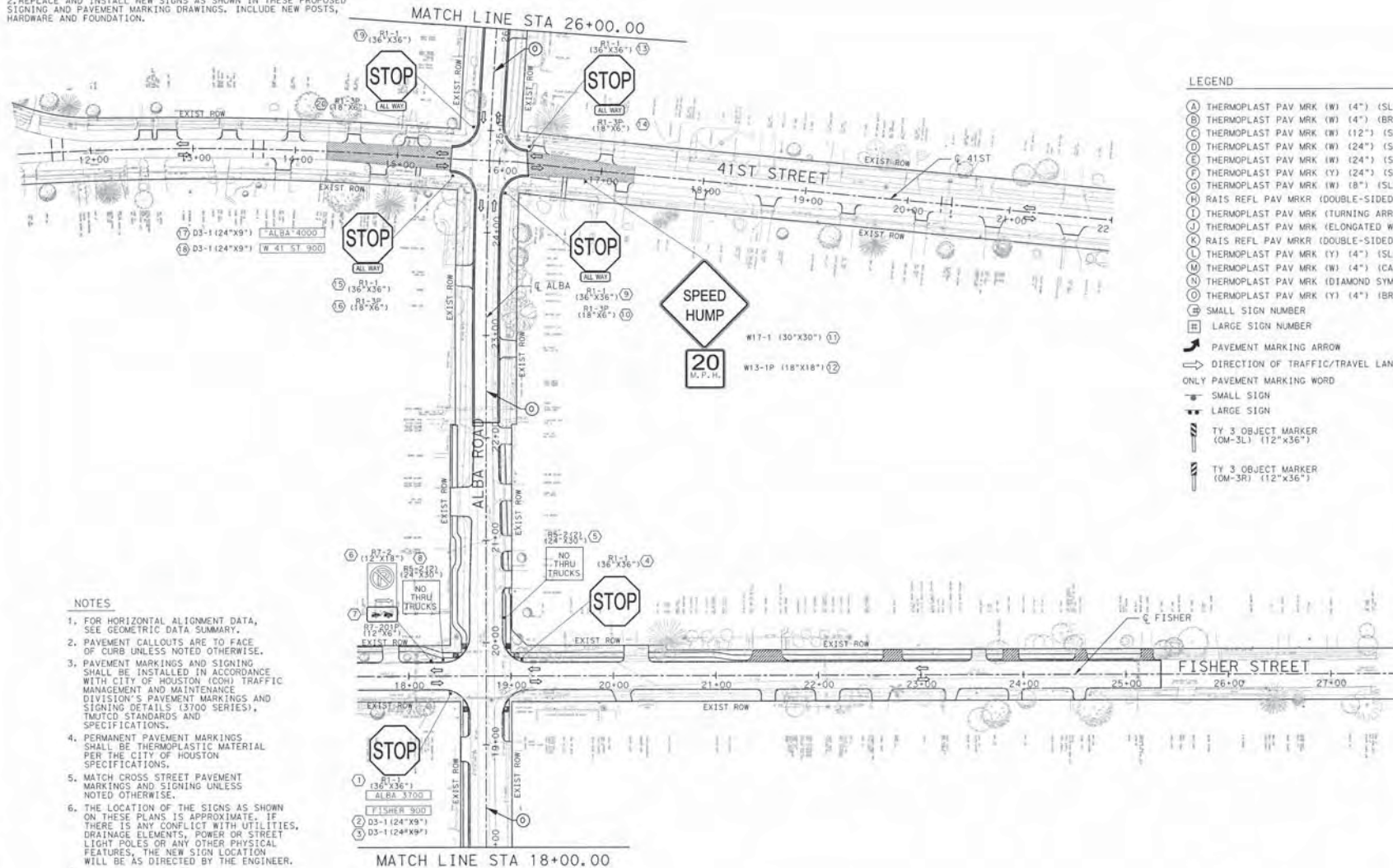
GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

SIGNING AND PAVEMENT MARKING LAYOUT
ALBA ROAD
BEGIN TO STA 18+00

NBS NUMBER: M-000285-0001-4
DRAWING SCALE: 1"=50'
CITY OF HOUSTON PM: JEFFREY T. HALL, P.E.
SHEET NO. 261 OF 385

55630

NOTE:
 1. EXISTING SPECIAL GUIDE/INFORMATION SIGNS, METRO SIGNS AND OTHER PUBLIC/PRIVATE ENTITY SIGNS ARE NOT SHOWN IN THESE PROPOSED SIGNING AND PAVEMENT MARKING DRAWINGS. HOWEVER, THOSE SIGNS SHALL BE PROTECTED/SALVAGED DURING CONSTRUCTION AND/OR REMOVED AND RELOCATED/RE-INSTALLED AT OR NEAR THE ORIGINAL LOCATION AFTER THE PAVEMENT CONSTRUCTION IS COMPLETE. PAYMENT WILL BE MADE FOR THIS WORK, WHICH INVOLVES NEW FOUNDATION, POSTS AND HARDWARE.
 2. REPLACE AND INSTALL NEW SIGNS AS SHOWN IN THESE PROPOSED SIGNING AND PAVEMENT MARKING DRAWINGS. INCLUDE NEW POSTS, HARDWARE AND FOUNDATION.



- NOTES
- FOR HORIZONTAL ALIGNMENT DATA, SEE GEOMETRIC DATA SUMMARY.
 - PAVEMENT CALLOUTS ARE TO FACE OF CURB UNLESS NOTED OTHERWISE.
 - PAVEMENT MARKINGS AND SIGNING SHALL BE INSTALLED IN ACCORDANCE WITH CITY OF HOUSTON (COH) TRAFFIC MANAGEMENT AND MAINTENANCE DIVISION'S PAVEMENT MARKINGS AND SIGNING DETAILS (3700 SERIES), TMUTCD STANDARDS AND SPECIFICATIONS.
 - PERMANENT PAVEMENT MARKINGS SHALL BE THERMOPLASTIC MATERIAL PER THE CITY OF HOUSTON SPECIFICATIONS.
 - MATCH CROSS STREET PAVEMENT MARKINGS AND SIGNING UNLESS NOTED OTHERWISE.
 - THE LOCATION OF THE SIGNS AS SHOWN ON THESE PLANS IS APPROXIMATE. IF THERE IS ANY CONFLICT WITH UTILITIES, DRAINAGE ELEMENTS, POWER OR STREET LIGHT POLES OR ANY OTHER PHYSICAL FEATURES, THE NEW SIGN LOCATION WILL BE AS DIRECTED BY THE ENGINEER.
 - SEE CITY OF HOUSTON STANDARDS PMD-2 THRU PMD-7 FOR TYPICAL DIMENSIONS AND DETAILS

LEGEND

- (A) THERMOPLAST PAV MKR (W) (4") (SLD)
- (B) THERMOPLAST PAV MKR (W) (4") (BRK)
- (C) THERMOPLAST PAV MKR (W) (12") (SLD)
- (D) THERMOPLAST PAV MKR (W) (24") (SLD) (STOP BAR)
- (E) THERMOPLAST PAV MKR (W) (24") (SLD) (CONTINENTAL X-WALK)
- (F) THERMOPLAST PAV MKR (Y) (24") (SLD) (CROSSHATCH)
- (G) THERMOPLAST PAV MKR (W) (8") (SLD)
- (H) RAIS REFL PAV MKR (DOUBLE-SIDED) (TY II-C-R)
- (I) THERMOPLAST PAV MKR (TURNING ARROW)
- (J) THERMOPLAST PAV MKR (ELONGATED WORD ONLY)
- (K) RAIS REFL PAV MKR (DOUBLE-SIDED) (TY II-A-A)
- (L) THERMOPLAST PAV MKR (Y) (4") (SLD)
- (M) THERMOPLAST PAV MKR (W) (4") (CAT-TRACKS)
- (N) THERMOPLAST PAV MKR (DIAMOND SYMBOL)
- (O) THERMOPLAST PAV MKR (Y) (4") (BRK)
- (P) SMALL SIGN NUMBER
- (Q) LARGE SIGN NUMBER
- (R) PAVEMENT MARKING ARROW
- (S) DIRECTION OF TRAFFIC/TRAVEL LANE
- ONLY PAVEMENT MARKING WORD
- (T) SMALL SIGN
- (U) LARGE SIGN
- (V) TY 3 OBJECT MARKER (OM-3L) (12"x36")
- (W) TY 3 OBJECT MARKER (OM-3R) (12"x36")



SDPS
Houston Storm Drainage Program Support

PGAL
3131 BRADSHAW, SUITE 200
HOUSTON, TEXAS 77002
PHONE (713) 422-1444
FAX (713) 968-9333

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

SIGNING AND PAVEMENT MARKING LAYOUT
ALBA ROAD
STA 18+00 TO STA 26+00

WBS NUMBER
M-000285-0001-4

DRAWING SCALE
1"=50'

CITY OF HOUSTON PW
JEFFREY T. HALL, P.E.
SHEET NO. 262 OF 345

55630

DATE: 07/20/2025 3:28:44 PM A:\000005\001\000_200\000\001\000_20002.dwg

NOTE:
 1. EXISTING SPECIAL GUIDE/INFORMATION SIGNS, METRO SIGNS AND OTHER PUBLIC/PRIVATE ENTITY SIGNS ARE NOT SHOWN IN THESE PROPOSED SIGNING AND PAVEMENT MARKING DRAWINGS. HOWEVER, THOSE SIGNS SHALL BE PROTECTED/SALVAGED DURING CONSTRUCTION AND/OR REMOVED AND RELOCATED/RE-INSTALLED AT OR NEAR THE ORIGINAL LOCATION AFTER THE PAVEMENT CONSTRUCTION IS COMPLETE. PAYMENT WILL BE MADE FOR THIS WORK, WHICH INVOLVES NEW FOUNDATION, POSTS AND HARDWARE.
 2. REPLACE AND INSTALL NEW SIGNS AS SHOWN IN THESE PROPOSED SIGNING AND PAVEMENT MARKING DRAWINGS. INCLUDE NEW POSTS, HARDWARE AND FOUNDATION.

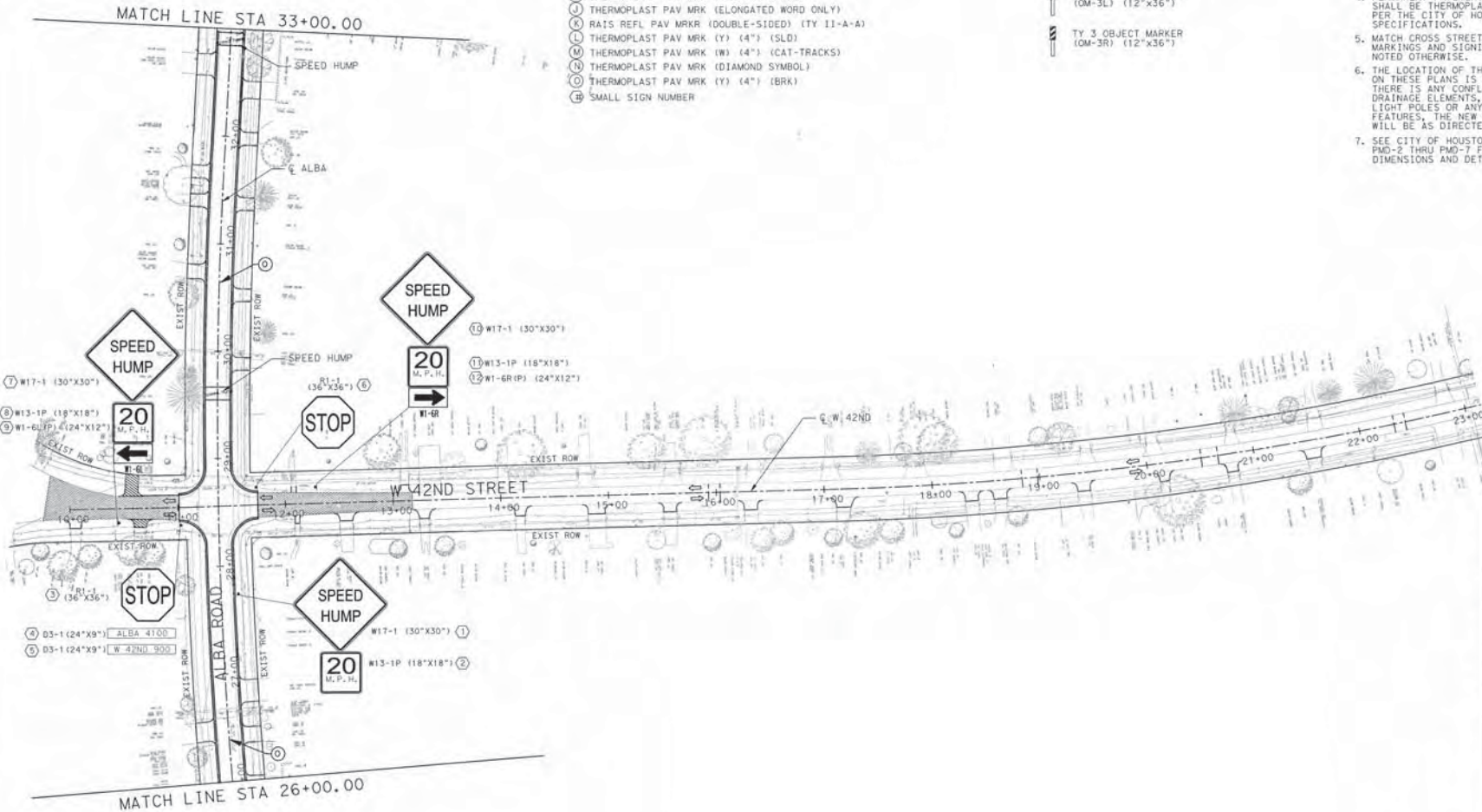
LEGEND

- (A) THERMOPLAST PAV MRK (W) (4") (SLD)
- (B) THERMOPLAST PAV MRK (W) (4") (BRK)
- (C) THERMOPLAST PAV MRK (W) (12") (SLD)
- (D) THERMOPLAST PAV MRK (W) (24") (SLD) (STOP BAR)
- (E) THERMOPLAST PAV MRK (W) (24") (SLD) (CONTINENTAL X-WALK)
- (F) THERMOPLAST PAV MRK (Y) (24") (SLD) (CROSSHATCH)
- (G) THERMOPLAST PAV MRK (W) (8") (SLD)
- (H) RAIS REFL PAV MRKR (DOUBLE-SIDED) (TY II-C-R)
- (I) THERMOPLAST PAV MRK (TURNING ARROW)
- (J) THERMOPLAST PAV MRK (ELONGATED WORD ONLY)
- (K) RAIS REFL PAV MRKR (DOUBLE-SIDED) (TY II-A-A)
- (L) THERMOPLAST PAV MRK (Y) (4") (SLD)
- (M) THERMOPLAST PAV MRK (W) (4") (CAT-TRACKS)
- (N) THERMOPLAST PAV MRK (DIAMOND SYMBOL)
- (O) THERMOPLAST PAV MRK (Y) (4") (BRK)
- (P) SMALL SIGN NUMBER

- [H] LARGE SIGN NUMBER
- [→] PAVEMENT MARKING ARROW
- [→] DIRECTION OF TRAFFIC/TRAVEL LANE
- [→] ONLY PAVEMENT MARKING WORD
- [S] SMALL SIGN
- [L] LARGE SIGN
- [TY 3] TY 3 OBJECT MARKER (OM-3L) (12"x36")
- [TY 3] TY 3 OBJECT MARKER (OM-3R) (12"x36")

NOTES

1. FOR HORIZONTAL ALIGNMENT DATA, SEE GEOMETRIC DATA SUMMARY.
2. PAVEMENT CALLOUTS ARE TO FACE OF CURB UNLESS NOTED OTHERWISE.
3. PAVEMENT MARKINGS AND SIGNING SHALL BE INSTALLED IN ACCORDANCE WITH CITY OF HOUSTON (COH) TRAFFIC MANAGEMENT AND MAINTENANCE DIVISION'S PAVEMENT MARKINGS AND SIGNING DETAILS (3700 SERIES), TMUTCD STANDARDS AND SPECIFICATIONS.
4. PERMANENT PAVEMENT MARKINGS SHALL BE THERMOPLASTIC MATERIAL PER THE CITY OF HOUSTON SPECIFICATIONS.
5. MATCH CROSS STREET PAVEMENT MARKINGS AND SIGNING UNLESS NOTED OTHERWISE.
6. THE LOCATION OF THE SIGNS AS SHOWN ON THESE PLANS IS APPROXIMATE. IF THERE IS ANY CONFLICT WITH UTILITIES, DRAINAGE ELEMENTS, POWER OR STREET LIGHT POLES OR ANY OTHER PHYSICAL FEATURES, THE NEW SIGN LOCATION WILL BE AS DIRECTED BY THE ENGINEER.
7. SEE CITY OF HOUSTON STANDARDS PMD-2 THRU PMD-7 FOR TYPICAL DIMENSIONS AND DETAILS.



SDPS
Houston Storm Drainage Program Support

PGAL
TYPE REG. NO. 7-2742
3131 BROADWAY, SUITE 200
HOUSTON, TEXAS 77042
PHONE (713) 922-1444
FAX (713) 968-9333

SURVEYED BY: LANDTECH
FIRM NO. P-5576

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

SIGNING AND PAVEMENT MARKING LAYOUT
ALBA ROAD
STA 26+00 TO STA 33+00

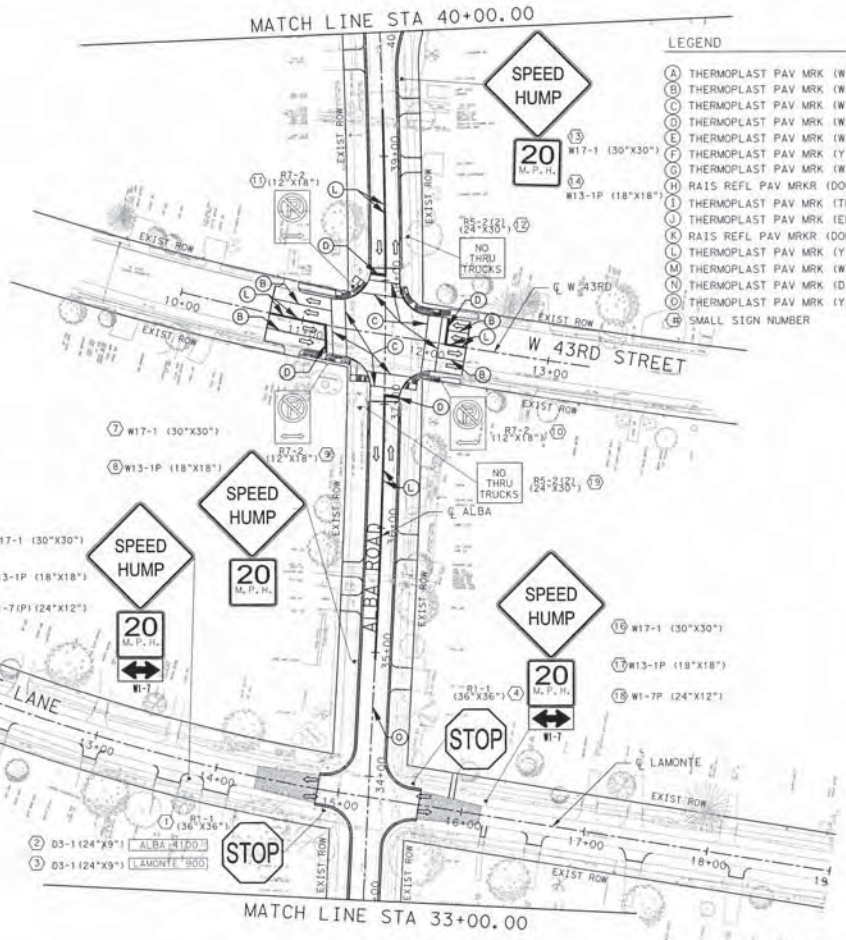
WBS NUMBER
M-000285-0001-4
DRAWING SCALE
1"=50'
CITY OF HOUSTON PM
JEFFREY T. HALL, P.E.
SHEET NO. 263 OF 385

55630

DATE: 02/22/05
 PLANNER: J. G. WOOD
 DRAWN: J. G. WOOD
 CHECKED: J. G. WOOD
 APPR: J. G. WOOD

NOTE:
 1. EXISTING SPECIAL GUIDE/INFORMATION SIGNS, METRO SIGNS AND OTHER PUBLIC/PRIVATE ENTITY SIGNS ARE NOT SHOWN IN THESE PROPOSED SIGNING AND PAVEMENT MARKING DRAWINGS. HOWEVER, THOSE SIGNS SHALL BE PROTECTED/SALVAGED DURING CONSTRUCTION AND/OR REMOVED AND RELOCATED/RE-INSTALLED AT OR NEAR THE ORIGINAL LOCATION AFTER THE PAVEMENT CONSTRUCTION IS COMPLETE. PAYMENT WILL BE MADE FOR THIS WORK, WHICH INVOLVES NEW FOUNDATION, POSTS AND HARDWARE.
 2. REPLACE AND INSTALL NEW SIGNS AS SHOWN IN THESE PROPOSED SIGNING AND PAVEMENT MARKING DRAWINGS. INCLUDE NEW POSTS, HARDWARE AND FOUNDATION.

- NOTES
- FOR HORIZONTAL ALIGNMENT DATA, SEE GEOMETRIC DATA SUMMARY.
 - PAVEMENT CALLOUTS ARE TO FACE OF CURB UNLESS NOTED OTHERWISE.
 - PAVEMENT MARKINGS AND SIGNING SHALL BE INSTALLED IN ACCORDANCE WITH CITY OF HOUSTON (COH) TRAFFIC MANAGEMENT AND MAINTENANCE DIVISION'S PAVEMENT MARKINGS AND SIGNING DETAILS (3700 SERIES), TRIMMED STANDARDS AND SPECIFICATIONS.
 - PERMANENT PAVEMENT MARKINGS SHALL BE THERMOPLASTIC MATERIAL PER THE CITY OF HOUSTON SPECIFICATIONS.
 - MATCH CROSS STREET PAVEMENT MARKINGS AND SIGNING UNLESS NOTED OTHERWISE.
 - THE LOCATION OF THE SIGNS AS SHOWN ON THESE PLANS IS APPROXIMATE. IF THERE IS ANY CONFLICT WITH UTILITIES, DRAINAGE ELEMENTS, POWER OR STREET LIGHT POLES OR ANY OTHER PHYSICAL FEATURES, THE NEW SIGN LOCATION WILL BE AS DIRECTED BY THE ENGINEER.
 - SEE CITY OF HOUSTON STANDARDS PMD-2 THRU PMD-7 FOR TYPICAL DIMENSIONS AND DETAILS



LEGEND

A	THERMOPLAST PAV MKR (W) (4") (SLD)
B	THERMOPLAST PAV MKR (W) (4") (BRK)
C	THERMOPLAST PAV MKR (W) (12") (SLD)
D	THERMOPLAST PAV MKR (W) (24") (SLD) (STOP BAR)
E	THERMOPLAST PAV MKR (W) (24") (SLD) (CONTINENTAL X-WALK)
F	THERMOPLAST PAV MKR (Y) (24") (SLD) (CROSSHATCH)
G	THERMOPLAST PAV MKR (W) (8") (SLD)
H	RAIS REFL PAV MKRR (DOUBLE-SIDED) (TY II-C-R)
I	THERMOPLAST PAV MKR (TURNING ARROW)
J	THERMOPLAST PAV MKR (ELONGATED WORD ONLY)
K	RAIS REFL PAV MKRR (DOUBLE-SIDED) (TY II-A-A)
L	THERMOPLAST PAV MKR (Y) (4") (SLD)
M	THERMOPLAST PAV MKR (W) (4") (CAT-TRACKS)
N	THERMOPLAST PAV MKR (DIAMOND SYMBOL)
O	THERMOPLAST PAV MKR (Y) (4") (BRK)
PH	SMALL SIGN NUMBER

- PH LARGE SIGN NUMBER
- PAVEMENT MARKING ARROW
- DIRECTION OF TRAFFIC/TRAVEL LANE
- ONLY PAVEMENT MARKING WORD
- SMALL SIGN
- LARGE SIGN
- TY 3 OBJECT MARKER (OM-3L) (12"x36")
- TY 3 OBJECT MARKER (OM-3R) (12"x36")



PGAL
 1996 REG. NO. 7-2742
 3131 BROADPARK, SUITE 200
 HOUSTON, TEXAS 77042
 PHONE (713) 632-1444
 FAX (713) 968-9333

COASTAL & SEABOARD
 54253
 19201
 19201

DESIGNED BY: LANDTECH
 PIR NO.: P-5578

CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

SIGNING AND PAVEMENT MARKING LAYOUT
 ALBA ROAD
 STA 33+00 TO STA 40+00

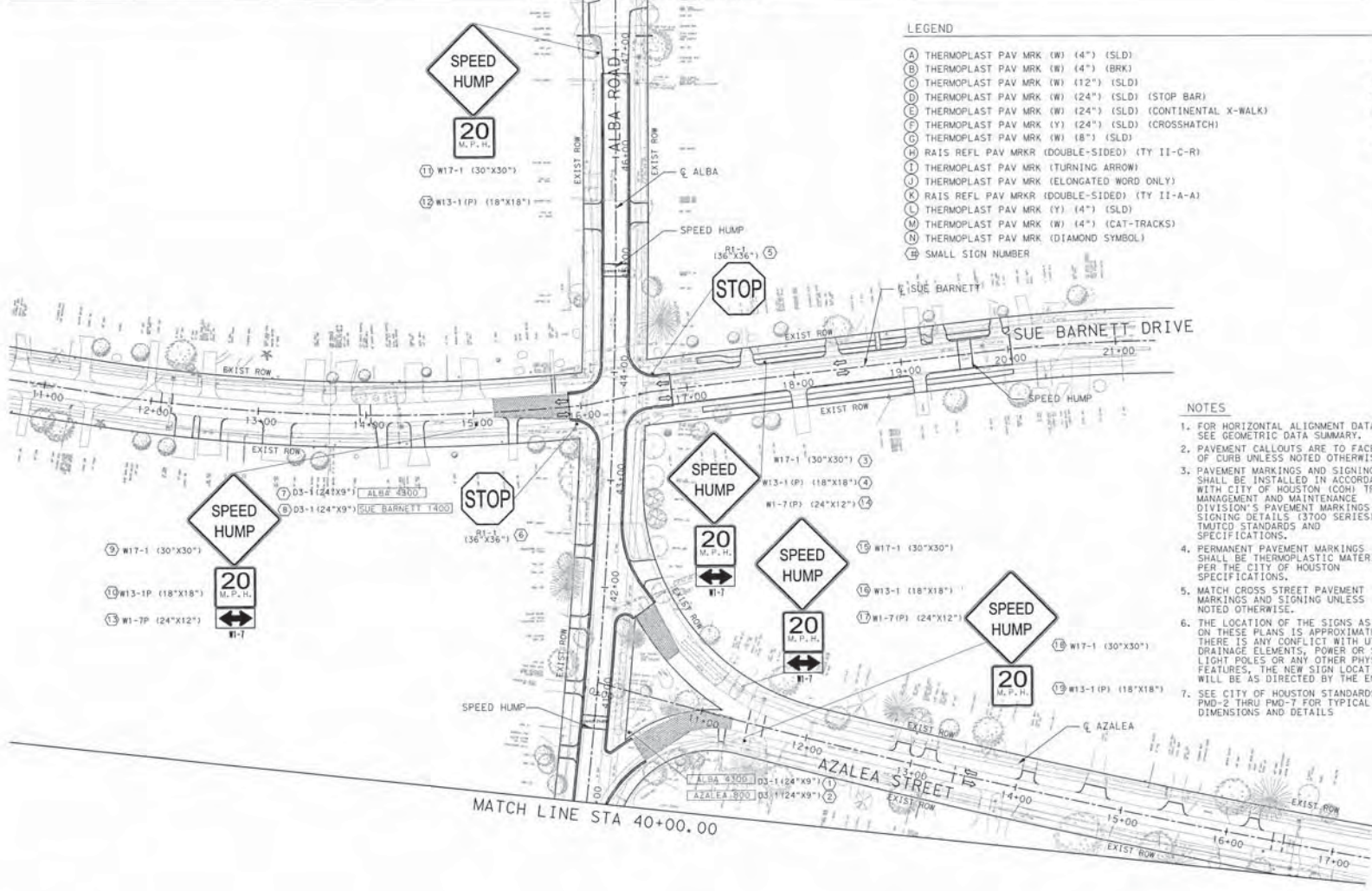
WBS NUMBER
M-000285-0001-4
DRAWING SCALE
1"=50'
CITY OF HOUSTON PM
JEFFREY T. HALL, P.E.
SHEET NO. 264 OF 385

55630

DATE: 02/22/2005 3:26:55 PM P:\DMS\CON\DRG\2005\0204\ALBA_S004.dwg

NOTES:
 1. EXISTING SPECIAL GUIDE/INFORMATION SIGNS, METRO SIGNS AND OTHER PUBLIC/PRIVATE ENTITY SIGNS ARE NOT SHOWN IN THESE PROPOSED SIGNING AND PAVEMENT MARKING DRAWINGS. HOWEVER, THOSE SIGNS SHALL BE PROTECTED/SALVAGED DURING CONSTRUCTION AND/OR REMOVED AND RELOCATED/RE-INSTALLED AT OR NEAR THE ORIGINAL LOCATION AFTER THE PAVEMENT CONSTRUCTION IS COMPLETE. PAYMENT WILL BE MADE FOR THIS WORK, WHICH INVOLVES NEW FOUNDATION, POSTS AND HARDWARE.
 2. REPLACE AND INSTALL NEW SIGNS AS SHOWN IN THESE PROPOSED SIGNING AND PAVEMENT MARKING DRAWINGS. INCLUDE NEW POSTS, HARDWARE AND FOUNDATION.

MATCH LINE STA 47+50.00



- LEGEND
- (A) THERMOPLAST PAV MRK (W) (4") (SLD)
 - (B) THERMOPLAST PAV MRK (W) (4") (BRK)
 - (C) THERMOPLAST PAV MRK (W) (12") (SLD)
 - (D) THERMOPLAST PAV MRK (W) (24") (SLD) (STOP BAR)
 - (E) THERMOPLAST PAV MRK (W) (24") (SLD) (CONTINENTAL X-WALK)
 - (F) THERMOPLAST PAV MRK (Y) (24") (SLD) (CROSSHATCH)
 - (G) THERMOPLAST PAV MRK (W) (8") (SLD)
 - (H) RAIS REFL PAV MRKR (DOUBLE-SIDED) (TY II-C-R)
 - (I) THERMOPLAST PAV MRK (TURNING ARROW)
 - (J) THERMOPLAST PAV MRK (ELONGATED WORD ONLY)
 - (K) RAIS REFL PAV MRKR (DOUBLE-SIDED) (TY II-A-A)
 - (L) THERMOPLAST PAV MRK (Y) (4") (SLD)
 - (M) THERMOPLAST PAV MRK (W) (4") (CAT-TRACKS)
 - (N) THERMOPLAST PAV MRK (DIAMOND SYMBOL)
 - (O) SMALL SIGN NUMBER

- (H) LARGE SIGN NUMBER
- (A) PAVEMENT MARKING ARROW
- (B) DIRECTION OF TRAFFIC/TRAVEL LANE
- (C) ONLY PAVEMENT MARKING WORD
- (D) SMALL SIGN
- (E) LARGE SIGN
- (F) TY 3 OBJECT MARKER (CM-3L) (12"x36")
- (G) TY 3 OBJECT MARKER (CM-3R) (12"x36")

- NOTES
1. FOR HORIZONTAL ALIGNMENT DATA, SEE GEOMETRIC DATA SUMMARY.
 2. PAVEMENT CALLOUTS ARE TO FACE OF CURB UNLESS NOTED OTHERWISE.
 3. PAVEMENT MARKINGS AND SIGNING SHALL BE INSTALLED IN ACCORDANCE WITH CITY OF HOUSTON (COM) TRAFFIC MANAGEMENT AND MAINTENANCE DIVISION'S PAVEMENT MARKINGS AND SIGNING DETAILS (3700 SERIES), TMTUC STANDARDS AND SPECIFICATIONS.
 4. PERMANENT PAVEMENT MARKINGS SHALL BE THERMOPLASTIC MATERIAL PER THE CITY OF HOUSTON SPECIFICATIONS.
 5. MATCH CROSS STREET PAVEMENT MARKINGS AND SIGNING UNLESS NOTED OTHERWISE.
 6. THE LOCATION OF THE SIGNS AS SHOWN ON THESE PLANS IS APPROXIMATE. IF THERE IS ANY CONFLICT WITH UTILITIES, DRAINAGE ELEMENTS, POWER OR STREET LIGHT POLES OR ANY OTHER PHYSICAL FEATURES, THE NEW SIGN LOCATION WILL BE AS DIRECTED BY THE ENGINEER.
 7. SEE CITY OF HOUSTON STANDARDS PMD-2 THRU PMD-7 FOR TYPICAL DIMENSIONS AND DETAILS



SDPS
 Houston Storm Drainage Program Support

PGAL
 3131 BRANIFF PARK, SUITE 200
 HOUSTON, TEXAS 77042
 PHONE (713) 622-1444
 FAX (713) 660-9333

STATE OF TEXAS
 COUNTY OF DALLAS
 JEFFREY T. HALL, P.E.
 ENGINEER

CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

SIGNING AND PAVEMENT MARKING LAYOUT
 ALBA ROAD
 STA 40+00 TO STA 47+50

WBS NUMBER	M-000285-0001-4
DRAWING SCALE	1"=50'
CITY OF HOUSTON PM	JEFFREY T. HALL, P.E.
SHEET NO. 265 OF 385	55630

DATE: 01/27/2005 08:45:38 AM A:\000285\240\2000\DRAWING\DWG\265.DWG

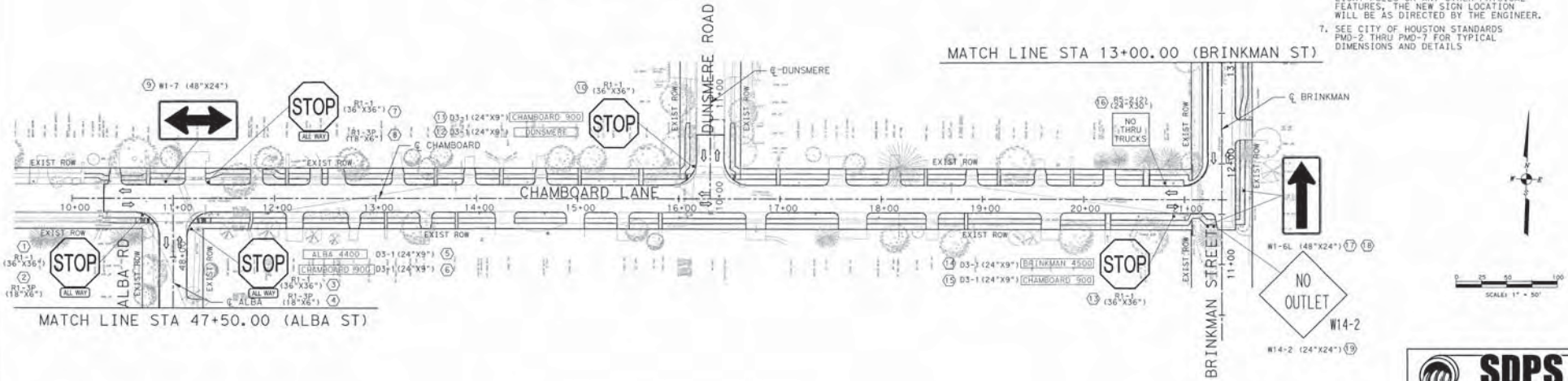
NOTE:
 1. EXISTING SPECIAL GUIDE/INFORMATION SIGNS, METRO SIGNS AND OTHER PUBLIC/PRIVATE ENTITY SIGNS ARE NOT SHOWN IN THESE PROPOSED SIGNING AND PAVEMENT MARKING DRAWINGS. HOWEVER, THOSE SIGNS SHALL BE PROTECTED/SALVAGED DURING CONSTRUCTION AND/OR REMOVED AND RELOCATED/RE-INSTALLED AT OR NEAR THE ORIGINAL LOCATION AFTER THE PAVEMENT CONSTRUCTION IS COMPLETE. PAYMENT WILL BE MADE FOR THIS WORK, WHICH INVOLVES NEW FOUNDATION, POSTS AND HARDWARE.
 2. REPLACE AND INSTALL NEW SIGNS AS SHOWN IN THESE PROPOSED SIGNING AND PAVEMENT MARKING DRAWINGS. INCLUDE NEW POSTS, HARDWARE AND FOUNDATION.

LEGEND


- (A) THERMOPLAST PAV MRK (W) (4") (SLD)
- (B) THERMOPLAST PAV MRK (W) (4") (BRK)
- (C) THERMOPLAST PAV MRK (W) (12") (SLD)
- (D) THERMOPLAST PAV MRK (W) (24") (SLD) (STOP BAR)
- (E) THERMOPLAST PAV MRK (W) (24") (SLD) (CONTINENTAL X-WALK)
- (F) THERMOPLAST PAV MRK (Y) (24") (SLD) (CROSSHATCH)
- (G) THERMOPLAST PAV MRK (W) (8") (SLD)
- (H) RAIS REFL PAV MRKR (DOUBLE-SIDED) (TY II-C-R)
- (I) THERMOPLAST PAV MRK (TURNING ARROW)
- (J) THERMOPLAST PAV MRK (ELONGATED WORD ONLY)
- (K) RAIS REFL PAV MRKR (DOUBLE-SIDED) (TY II-A-A)
- (L) THERMOPLAST PAV MRK (Y) (4") (SLD)
- (M) THERMOPLAST PAV MRK (W) (4") (CAT-TRACKS)
- (N) THERMOPLAST PAV MRK (DIAMOND SYMBOL)
- (P) SMALL SIGN NUMBER
- (S) LARGE SIGN NUMBER
- ➔ PAVEMENT MARKING ARROW
- ➔ DIRECTION OF TRAFFIC/TRAVEL LANE
- ➔ ONLY PAVEMENT MARKING WORD
- SMALL SIGN
- LARGE SIGN
- ⚡ TY 3 OBJECT MARKER (OM-3L) (12"x36")
- ⚡ TY 3 OBJECT MARKER (OM-3R) (12"x36")

NOTES

1. FOR HORIZONTAL ALIGNMENT DATA, SEE GEOMETRIC DATA SUMMARY.
2. PAVEMENT CALLOUTS ARE TO FACE OF CURB UNLESS NOTED OTHERWISE.
3. PAVEMENT MARKINGS AND SIGNING SHALL BE INSTALLED IN ACCORDANCE WITH CITY OF HOUSTON (COH) TRAFFIC MANAGEMENT AND MAINTENANCE DIVISION'S PAVEMENT MARKINGS AND SIGNING DETAILS (3700 SERIES), TMLTD STANDARDS AND SPECIFICATIONS.
4. PERMANENT PAVEMENT MARKINGS SHALL BE THERMOPLASTIC MATERIAL PER THE CITY OF HOUSTON SPECIFICATIONS.
5. MATCH CROSS STREET PAVEMENT MARKINGS AND SIGNING UNLESS NOTED OTHERWISE.
6. THE LOCATION OF THE SIGNS AS SHOWN ON THESE PLANS IS APPROXIMATE. IF THERE IS ANY CONFLICT WITH UTILITIES, DRAINAGE ELEMENTS, POWER OR STREET LIGHT POLES OR ANY OTHER PHYSICAL FEATURES, THE NEW SIGN LOCATION WILL BE AS DIRECTED BY THE ENGINEER.
7. SEE CITY OF HOUSTON STANDARDS PMD-2 THRU PMD-7 FOR TYPICAL DIMENSIONS AND DETAILS.



DATE: 07/27/2015 0:52:11 AM R:\020945\020945.DWG (2015)070709.dwg (2015)0709.dwg

 <p>SDPS Houston Storm Drainage Program Support</p>	
 <p>PG&L TYPE REG NO. P-2552 3131 BRINDLEWOOD, SUITE 200 HOUSTON, TEXAS 77042 PHONE (713) 822-1444 FAX (713) 968-9333</p>	
<p>SURVEYED BY: LAMTECH INC. 04-9316</p>	
<p>CITY OF HOUSTON DEPARTMENT OF PUBLIC WORKS AND ENGINEERING</p>	
<p>GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING</p>	
<p>SIGNING AND PAVEMENT MARKING LAYOUT CHAMBOARD LANE</p>	
<p>WBS NUMBER M-000285-0001-4</p>	 <p>55630</p>
<p>DRAWING SCALE 1"=50'</p>	
<p>CITY OF HOUSTON PM JEFFREY T. HALL, P. E. SHEET NO. 266 OF 385</p>	

SUMMARY OF SMALL SIGNS

PLAN SHEET NO.	SIGN NO.	SIGN NOMENCLATURE	SIGN TEXT	SIGN DIMENSIONS (IN)	SQUARE POST	SIGNAL MOUNT	ROUND POST (PERMISSION REQ'D TRAFFIC ENGINEER)	NUMBER OF POSTS (1 OR 2)	SIGN AREA SQ. FT. (FOR INFORMATION ONLY, NOT FOR BID)	SIGN POST SIZE (TABLE A) (1/4 GAUGE)
261	1	R1-1	STOP	36 X 36	108WG	N/A	N/A	1	9.00	1'-3/4" X 1'-3/4"
261	2	R1-1	STREET NAME	24 X 9	108WG	N/A	N/A	1	1.50	1'-3/4" X 1'-3/4"
261	3	R1-1	BIKE ROUTE	24 X 9	108WG	N/A	N/A	1	1.50	1'-3/4" X 1'-3/4"
261	4	R1-1	STOP	36 X 36	108WG	N/A	N/A	1	9.00	1'-3/4" X 1'-3/4"
261	5	R1-1	ALL WAY	18 X 6	108WG	N/A	N/A	1	0.75	1'-3/4" X 1'-3/4"
261	6	R1-1	STOP	30 X 30	108WG	N/A	N/A	1	9.00	1'-3/4" X 1'-3/4"
261	7	R1-1	ALL WAY	18 X 6	108WG	N/A	N/A	1	0.75	1'-3/4" X 1'-3/4"
261	8	R1-1	STREET NAME	24 X 9	108WG	N/A	N/A	1	1.50	1'-3/4" X 1'-3/4"
261	9	R1-1	STOP	36 X 36	108WG	N/A	N/A	1	9.00	1'-3/4" X 1'-3/4"
261	10	R1-1	STOP	36 X 36	108WG	N/A	N/A	1	9.00	1'-3/4" X 1'-3/4"
261	11	R1-1	STOP	36 X 36	108WG	N/A	N/A	1	9.00	1'-3/4" X 1'-3/4"
261	12	R1-1	ALL WAY	18 X 6	108WG	N/A	N/A	1	0.75	1'-3/4" X 1'-3/4"
261	13	R1-1	STOP	36 X 36	108WG	N/A	N/A	1	9.00	1'-3/4" X 1'-3/4"
261	14	R1-1	ALL WAY	18 X 6	108WG	N/A	N/A	1	0.75	1'-3/4" X 1'-3/4"
261	15	R1-1	NO PARKING	18 X 6	108WG	N/A	N/A	1	0.75	1'-3/4" X 1'-3/4"
261	16	R1-1	TOW AWAY ZONE	18 X 6	108WG	N/A	N/A	1	0.75	1'-3/4" X 1'-3/4"
262	1	R1-1	STOP	36 X 36	108WG	N/A	N/A	1	9.00	1'-3/4" X 1'-3/4"
262	2	R1-1	STREET NAME	24 X 9	108WG	N/A	N/A	1	1.50	1'-3/4" X 1'-3/4"
262	3	R1-1	STREET NAME	24 X 9	108WG	N/A	N/A	1	1.50	1'-3/4" X 1'-3/4"
262	4	R1-1	STOP	36 X 36	108WG	N/A	N/A	1	9.00	1'-3/4" X 1'-3/4"
262	5	R5-2(2)	NO THRU TRUCKS	24 X 30	108WG	N/A	N/A	1	5.00	1'-3/4" X 1'-3/4"
262	6	R7-2	NO PARKING	12 X 18	108WG	N/A	N/A	1	1.50	1'-3/4" X 1'-3/4"
262	7	R7-2(2)	TOW AWAY ZONE	18 X 6	108WG	N/A	N/A	1	0.75	1'-3/4" X 1'-3/4"
262	8	R6-2(2)	NO THRU TRUCKS	24 X 30	108WG	N/A	N/A	1	5.00	1'-3/4" X 1'-3/4"
262	9	R1-1	STOP	36 X 36	108WG	N/A	N/A	1	9.00	1'-3/4" X 1'-3/4"
262	10	R1-1	ALL WAY	18 X 6	108WG	N/A	N/A	1	0.75	1'-3/4" X 1'-3/4"
262	11	R1-1	SPEED HUMP	30 X 30	108WG	N/A	N/A	1	6.25	1'-3/4" X 1'-3/4"
262	12	R1-1	SPEED HUMP	20 MPH	108WG	N/A	N/A	1	2.25	1'-3/4" X 1'-3/4"
262	13	R1-1	STOP	36 X 36	108WG	N/A	N/A	1	9.00	1'-3/4" X 1'-3/4"
262	14	R1-1	ALL WAY	18 X 6	108WG	N/A	N/A	1	0.75	1'-3/4" X 1'-3/4"
262	15	R1-1	STOP	36 X 36	108WG	N/A	N/A	1	9.00	1'-3/4" X 1'-3/4"
262	16	R1-1	ALL WAY	18 X 6	108WG	N/A	N/A	1	0.75	1'-3/4" X 1'-3/4"
262	17	R1-1	ALL WAY	18 X 6	108WG	N/A	N/A	1	0.75	1'-3/4" X 1'-3/4"
262	18	R1-1	STREET NAME	24 X 9	108WG	N/A	N/A	1	1.50	1'-3/4" X 1'-3/4"
262	19	R1-1	STOP	36 X 36	108WG	N/A	N/A	1	9.00	1'-3/4" X 1'-3/4"
262	20	R1-1	ALL WAY	18 X 6	108WG	N/A	N/A	1	0.75	1'-3/4" X 1'-3/4"
263	1	W13-1P	SPEED HUMP	30 X 30	108WG	N/A	N/A	1	6.25	1'-3/4" X 1'-3/4"
263	2	W13-1P	SPEED HUMP	20 MPH	108WG	N/A	N/A	1	2.25	1'-3/4" X 1'-3/4"
263	3	R1-1	STOP	36 X 36	108WG	N/A	N/A	1	9.00	1'-3/4" X 1'-3/4"
263	4	R1-1	STREET NAME	24 X 9	108WG	N/A	N/A	1	1.50	1'-3/4" X 1'-3/4"
263	5	R1-1	STOP	36 X 36	108WG	N/A	N/A	1	9.00	1'-3/4" X 1'-3/4"
263	6	R1-1	STOP	36 X 36	108WG	N/A	N/A	1	9.00	1'-3/4" X 1'-3/4"
263	7	W13-1P	SPEED HUMP	30 X 30	108WG	N/A	N/A	1	6.25	1'-3/4" X 1'-3/4"
263	8	W13-1P	SPEED HUMP	20 MPH	108WG	N/A	N/A	1	2.25	1'-3/4" X 1'-3/4"
263	9	W16-1P	LEFT ARROW	24 X 12	108WG	N/A	N/A	1	2.00	1'-3/4" X 1'-3/4"
263	10	W17-1	SPEED HUMP	30 X 30	108WG	N/A	N/A	1	6.25	1'-3/4" X 1'-3/4"
263	11	W13-1P	20 MPH	18 X 18	108WG	N/A	N/A	1	2.25	1'-3/4" X 1'-3/4"
263	12	W16-1P	RIGHT ARROW	24 X 12	108WG	N/A	N/A	1	2.00	1'-3/4" X 1'-3/4"
264	1	R1-1	STOP	36 X 36	108WG	N/A	N/A	1	9.00	1'-3/4" X 1'-3/4"
264	2	R1-1	STREET NAME	24 X 9	108WG	N/A	N/A	1	1.50	1'-3/4" X 1'-3/4"
264	3	R1-1	STOP	36 X 36	108WG	N/A	N/A	1	9.00	1'-3/4" X 1'-3/4"
264	4	R1-1	STOP	36 X 36	108WG	N/A	N/A	1	9.00	1'-3/4" X 1'-3/4"
264	5	W17-1	SPEED HUMP	30 X 30	108WG	N/A	N/A	1	6.25	1'-3/4" X 1'-3/4"
264	6	W13-1P	20 MPH	18 X 18	108WG	N/A	N/A	1	2.25	1'-3/4" X 1'-3/4"
264	7	W17-1	SPEED HUMP	30 X 30	108WG	N/A	N/A	1	6.25	1'-3/4" X 1'-3/4"
264	8	W13-1P	20 MPH	18 X 18	108WG	N/A	N/A	1	2.25	1'-3/4" X 1'-3/4"
264	9	R7-2	NO PARKING	12 X 18	108WG	N/A	N/A	1	1.50	1'-3/4" X 1'-3/4"
264	10	R7-2	NO PARKING	12 X 18	108WG	N/A	N/A	1	1.50	1'-3/4" X 1'-3/4"
264	11	R7-2	NO PARKING	12 X 18	108WG	N/A	N/A	1	1.50	1'-3/4" X 1'-3/4"
264	12	R5-2(2)	NO THRU TRUCKS	24 X 30	108WG	N/A	N/A	1	5.00	1'-3/4" X 1'-3/4"
264	13	W17-1	SPEED HUMP	30 X 30	108WG	N/A	N/A	1	6.25	1'-3/4" X 1'-3/4"
264	14	W13-1P	20 MPH	18 X 18	108WG	N/A	N/A	1	2.25	1'-3/4" X 1'-3/4"
264	15	W1-7(P)	TWO-DIRECTION ARROW	30 X 30	108WG	N/A	N/A	1	6.25	1'-3/4" X 1'-3/4"
264	16	W17-1	SPEED HUMP	30 X 30	108WG	N/A	N/A	1	6.25	1'-3/4" X 1'-3/4"
264	17	W13-1P	20 MPH	18 X 18	108WG	N/A	N/A	1	2.25	1'-3/4" X 1'-3/4"
264	18	W1-7(P)	TWO-DIRECTION ARROW	24 X 12	108WG	N/A	N/A	1	2.00	1'-3/4" X 1'-3/4"
264	19	R5-2(2)	NO THRU TRUCKS	24 X 30	108WG	N/A	N/A	1	5.00	1'-3/4" X 1'-3/4"
265	1	R1-1	STREET NAME	24 X 9	108WG	N/A	N/A	1	1.50	1'-3/4" X 1'-3/4"
265	2	R1-1	STREET NAME	24 X 9	108WG	N/A	N/A	1	1.50	1'-3/4" X 1'-3/4"
265	3	W17-1	SPEED HUMP	30 X 30	108WG	N/A	N/A	1	6.25	1'-3/4" X 1'-3/4"
265	4	W13-1P	20 MPH	18 X 18	108WG	N/A	N/A	1	2.25	1'-3/4" X 1'-3/4"
265	5	R1-1	STOP	36 X 36	108WG	N/A	N/A	1	9.00	1'-3/4" X 1'-3/4"
265	6	R1-1	STOP	36 X 36	108WG	N/A	N/A	1	9.00	1'-3/4" X 1'-3/4"
265	7	R1-1	STREET NAME	24 X 9	108WG	N/A	N/A	1	1.50	1'-3/4" X 1'-3/4"
265	8	R1-1	STREET NAME	24 X 9	108WG	N/A	N/A	1	1.50	1'-3/4" X 1'-3/4"
265	9	W17-1	SPEED HUMP	30 X 30	108WG	N/A	N/A	1	6.25	1'-3/4" X 1'-3/4"
265	10	W13-1P	20 MPH	18 X 18	108WG	N/A	N/A	1	2.25	1'-3/4" X 1'-3/4"
265	11	W17-1	SPEED HUMP	30 X 30	108WG	N/A	N/A	1	6.25	1'-3/4" X 1'-3/4"
265	12	W13-1P	20 MPH	18 X 18	108WG	N/A	N/A	1	2.25	1'-3/4" X 1'-3/4"
265	13	W1-7(P)	TWO-DIRECTION ARROW	24 X 12	108WG	N/A	N/A	1	2.00	1'-3/4" X 1'-3/4"
265	14	W1-7(P)	TWO-DIRECTION ARROW	24 X 12	108WG	N/A	N/A	1	2.00	1'-3/4" X 1'-3/4"
265	15	W17-1	SPEED HUMP	30 X 30	108WG	N/A	N/A	1	6.25	1'-3/4" X 1'-3/4"
265	16	W13-1P	20 MPH	18 X 18	108WG	N/A	N/A	1	2.25	1'-3/4" X 1'-3/4"
265	17	W1-7(P)	TWO-DIRECTION ARROW	24 X 12	108WG	N/A	N/A	1	2.00	1'-3/4" X 1'-3/4"
265	18	W17-1	SPEED HUMP	30 X 30	108WG	N/A	N/A	1	6.25	1'-3/4" X 1'-3/4"
265	19	W13-1P	20 MPH	18 X 18	108WG	N/A	N/A	1	2.25	1'-3/4" X 1'-3/4"



SDPS
Houston Storm Drainage
Program Support



PGAL
Professional Geometric Associates, L.P.
18111
3131 BISHOP RD, SUITE 200
HOUSTON, TEXAS 77042
Phone: (713) 622-1444
Fax: (713) 668-3333

SURVEYED BY: LANOTCH
 FB NO. P-5576

CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND
 SHEPHERD PARK (CENTRAL)
 DRAINAGE AND PAVING

SUMMARY OF SMALL SIGNS
 SHEET 1 OF 3

WRS NUMBER
M-000285-0001-4

DRAWING SCALE
NTS

CITY OF HOUSTON, TX
JEFFREY T. HALL, P.E.

SHEET NO. 26A80F 385



55630

SUMMARY OF SMALL SIGNS

PLAN SHEET NO.	SIGN NO.	SIGN NOMENCLATURE	SIGN TEXT	SIGN DIMENSIONS (IN)	SQUARE POST	SIGNAL MOUNT	ROUND POST (NEEDED FROM PERMISSON (PERMITS FROM CITY TRAFFIC ENGINEER))	NUMBER OF POSTS (1 OR 2)	SIGN AREA SQ. FT. (FOR INFORMATION ONLY, NOT FOR BID)	SIGN POST SIZE (TABLE A) (1.4 GAUGE)
268	9	R1-1	STOP	36 X 36	108KG	N/A	N/A	1	9.00	1-3/4" X 1-3/4"
268	10	D3-1	STREET NAME	24 X 9	108KG	N/A	N/A		1.50	1-3/4" X 1-3/4"
268	11	D3-1	STREET NAME	24 X 9	108KG	N/A	N/A		1.50	1-3/4" X 1-3/4"
268	12	R7-2	NO PARKING	12 X 18	108KG	N/A	N/A	1	1.50	1-3/4" X 1-3/4"
268	13	R7-2	NO PARKING	12 X 18	108KG	N/A	N/A	1	1.50	1-3/4" X 1-3/4"
268	14	S4-3P(F10)	SCHOOL	24 X 8	108KG	N/A	N/A	1	1.33	1-3/4" X 1-3/4"
268	15	R2-1	SPEED LIMIT 20	24 X 30	108KG	N/A	N/A	1	5.00	1-3/4" X 1-3/4"
268	16	S4-1P	7:15-9:15 AM 2:45-3:30 PM	24 X 10	108KG	N/A	N/A		1.67	
268	17	R7-2	NO PARKING	12 X 18	108KG	N/A	N/A	1	1.50	1-3/4" X 1-3/4"
268	18	R7-2	NO PARKING	12 X 18	108KG	N/A	N/A	1	1.50	1-3/4" X 1-3/4"
268	19	R7-2	NO PARKING	12 X 18	108KG	N/A	N/A	1	1.50	1-3/4" X 1-3/4"
268	20	S4-3P(F10)	SCHOOL	24 X 8	108KG	N/A	N/A	1	1.33	1-3/4" X 1-3/4"
268	21	R2-1	SPEED LIMIT 20	24 X 30	108KG	N/A	N/A	1	5.00	1-3/4" X 1-3/4"
268	22	S4-1P	7:15-9:15 AM 2:45-3:30 PM	24 X 10	108KG	N/A	N/A		1.67	
268	23	R1-1	STOP	36 X 36	108KG	N/A	N/A	1	9.00	1-3/4" X 1-3/4"
268	24	D3-1	STREET NAME	24 X 9	108KG	N/A	N/A		1.50	1-3/4" X 1-3/4"
268	25	D3-1	STREET NAME	24 X 9	108KG	N/A	N/A		1.50	1-3/4" X 1-3/4"
268	26	S4-3P(F10)	SCHOOL	24 X 8	108KG	N/A	N/A	1	1.33	1-3/4" X 1-3/4"
268	27	R2-1	SPEED LIMIT 20	24 X 30	108KG	N/A	N/A	1	5.00	1-3/4" X 1-3/4"
268	28	S4-1P	7:15-9:15 AM 2:45-3:30 PM	24 X 10	108KG	N/A	N/A		1.67	
268	29	R1-8	PEDESTRIAN CROSSING	36 X 18	108KG	N/A	N/A	1	4.50	1-3/4" X 1-3/4"
268	30	M16-7PL	DOWN DIAGONAL LEFT ARROW	30 X 18	108KG	N/A	N/A		3.75	1-3/4" X 1-3/4"
268	31	S4-3P(F10)	SCHOOL	24 X 8	108KG	N/A	N/A	1	1.33	1-3/4" X 1-3/4"
268	32	R2-1	SPEED LIMIT 20	24 X 30	108KG	N/A	N/A		5.00	
268	33	S4-1P	7:15-9:15 AM 2:45-3:30 PM	24 X 10	108KG	N/A	N/A		1.67	
268	34	R7-2	NO PARKING	12 X 18	108KG	N/A	N/A	1	1.50	1-3/4" X 1-3/4"
268	35	R1-1	STOP	36 X 36	108KG	N/A	N/A	1	9.00	1-3/4" X 1-3/4"
268	36	D3-1	STREET NAME	24 X 9	108KG	N/A	N/A		1.50	1-3/4" X 1-3/4"
268	37	D3-1	STREET NAME	24 X 9	108KG	N/A	N/A		1.50	1-3/4" X 1-3/4"
268	38	S5-2R1P	END SCHOOL ZONE	24 X 8	108KG	N/A	N/A	1	1.33	1-3/4" X 1-3/4"
268	39	D3-1	SPEED LIMIT 30	24 X 30	108KG	N/A	N/A		5.00	
268	40	S4-3P(F10)	SCHOOL	24 X 10	108KG	N/A	N/A	1	1.67	1-3/4" X 1-3/4"
268	41	R2-1	SPEED LIMIT 20	24 X 30	108KG	N/A	N/A		5.00	
268	42	S4-1P	7:15-9:15 AM 2:45-3:30 PM	24 X 10	108KG	N/A	N/A		1.67	
268	43	R1-8	PEDESTRIAN CROSSING	36 X 18	108KG	N/A	N/A	1	4.50	1-3/4" X 1-3/4"
268	44	M16-7PL	DOWN DIAGONAL LEFT ARROW	30 X 18	108KG	N/A	N/A		3.75	1-3/4" X 1-3/4"
268	45	S5-2R1P	END SCHOOL ZONE	24 X 10	108KG	N/A	N/A	1	1.67	1-3/4" X 1-3/4"
268	46	R2-1	SPEED LIMIT 30	24 X 30	108KG	N/A	N/A		5.00	
268	47	S4-3P(F10)	SCHOOL	24 X 8	108KG	N/A	N/A	1	1.33	1-3/4" X 1-3/4"
268	48	R2-1	SPEED LIMIT 20	24 X 30	108KG	N/A	N/A		5.00	
268	49	S4-1P	7:15-9:15 AM 2:45-3:30 PM	24 X 10	108KG	N/A	N/A		1.67	
268	50	S5-2R1P	END SCHOOL ZONE	24 X 10	108KG	N/A	N/A	1	1.67	1-3/4" X 1-3/4"
268	51	D3-1	SPEED LIMIT 30	24 X 30	108KG	N/A	N/A		5.00	
268	52	R1-8	PEDESTRIAN CROSSING	36 X 18	108KG	N/A	N/A	1	4.50	1-3/4" X 1-3/4"
268	53	M16-9P	HEAD	24 X 12	108KG	N/A	N/A		2.00	1-3/4" X 1-3/4"



SDPS
Houston Storm Drainage
Program Support



PGAL
1979-2002
3151 BRADPARK, SUITE 200
Houston, Texas 77040
Phone (713) 622-1444
Fax (713) 668-8332



CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND
SHEPHERD PARK (CENTRAL)
DRAINAGE AND PAVING

SUMMARY OF SMALL SIGNS
SHEET 3 OF 3

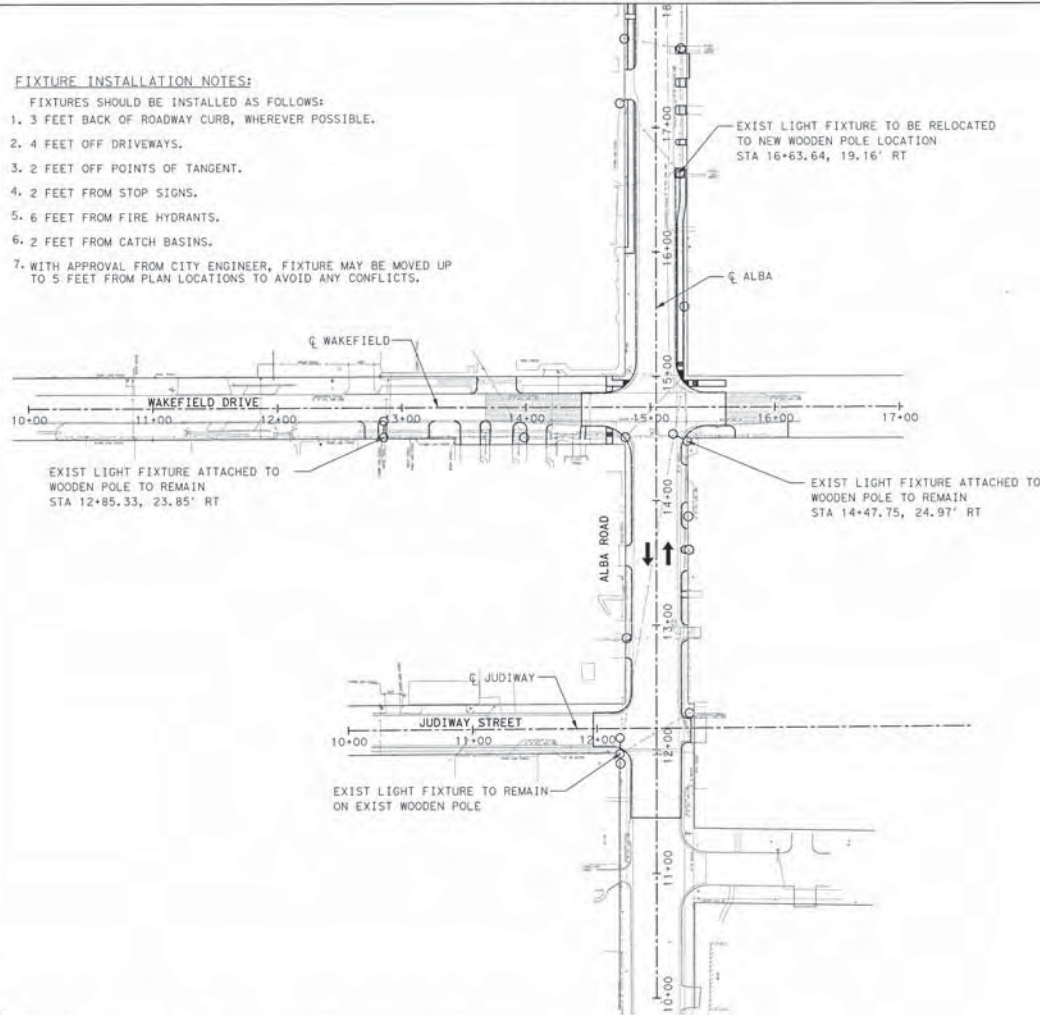
WBS NUMBER
M-000285-0001-4
DRAWING SCALE
NTS
CITY OF HOUSTON, TX
JEFFREY T. HALL, P.E.
SHEET NO. 268CF OF 385

55630

MATCH LINE STA 18+00.00

FIXTURE INSTALLATION NOTES:

- FIXTURES SHOULD BE INSTALLED AS FOLLOWS:
1. 3 FEET BACK OF ROADWAY CURB, WHEREVER POSSIBLE.
 2. 4 FEET OFF DRIVEWAYS.
 3. 2 FEET OFF POINTS OF TANGENT.
 4. 2 FEET FROM STOP SIGNS.
 5. 6 FEET FROM FIRE HYDRANTS.
 6. 2 FEET FROM CATCH BASINS.
 7. WITH APPROVAL FROM CITY ENGINEER, FIXTURE MAY BE MOVED UP TO 5 FEET FROM PLAN LOCATIONS TO AVOID ANY CONFLICTS.



LEGEND

- ➔ DIRECTION OF TRAFFIC/TRAVEL LANE
- ☼ EXISTING STREET LIGHT TO REMAIN
- ☼⊙ PROPOSED, NEW METAL STREET LIGHT
- * RELOCATE METAL STREET LIGHT
- EXISTING POWER POLE
- RELOCATE EXISTING POWER POLE
- EXISTING STREET LIGHT FIXTURE TO BE RELOCATED TO NEW WOODEN POLE LOCATION
- ⊙ PROPOSED STREET LIGHT ON EXISTING WOODEN POLE
- ⊙ EXISTING STREET LIGHT FIXTURE ATTACHED TO WOODEN POWER POLE TO REMAIN
- PROPOSED 2" CONDUIT WITH PULL WIRE - PROVIDED AND INSTALLED BY CONTRACTOR (SCH. 40 BEHIND CURB, SCH. 80 ON STREET CROSSINGS)
- ◆ PROPOSED PULLBOX - FURNISHED BY CENTERPOINT ENERGY AND INSTALLED BY CONTRACTOR

NOTES:

1. CENTERPOINT ENERGY IS RESPONSIBLE FOR RELOCATION OF POWER POLES AND STREET LIGHTS.
2. REMOVAL AND TRANSPORTATION COSTS OF ALL RELOCATED POWER AND LIGHT POLES AND ASSOCIATED ACCESSORIES SHALL BE BY OTHERS.
3. POLES AND OTHER DEVICES SHALL NOT BE REMOVED UNTIL TEMPORARY OR PERMANENT REPLACEMENT POLES, SIGNS, TRAFFIC SIGNALS AND LIGHTING HAVE BEEN INSTALLED.
4. CENTERPOINT ENERGY SHALL INSTALL ALL TEMPORARY AND PERMANENT POLES A MINIMUM 3 FEET CLEAR FROM THE FACE OF CURB.



PGAL
 STATE REG.
 NO. P-2942
 3131 BRAWLICK, SUITE 200
 HOUSTON, TEXAS 77042
 PHONE (713) 822-1444
 FAX (713) 968-9333

STATE OF TEXAS
 COSTAS K. GEORGIADIS
 54355
 LICENSED PROFESSIONAL ENGINEER

SUPERVISED BY: LANDTECH
 FE NO. P-3574

CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING
 STREET LIGHTING PLAN
 ALBA ROAD
 BEGIN STA TO STA 18+00
 SHEET 1 OF 5

MDS NUMBER	M-000285-0001-4
DRAWING SCALE	1"=50'
CITY OF HOUSTON PW	JEFFREY T. HALL, P.E.
SHEET NO. 269 OF 385	

55630

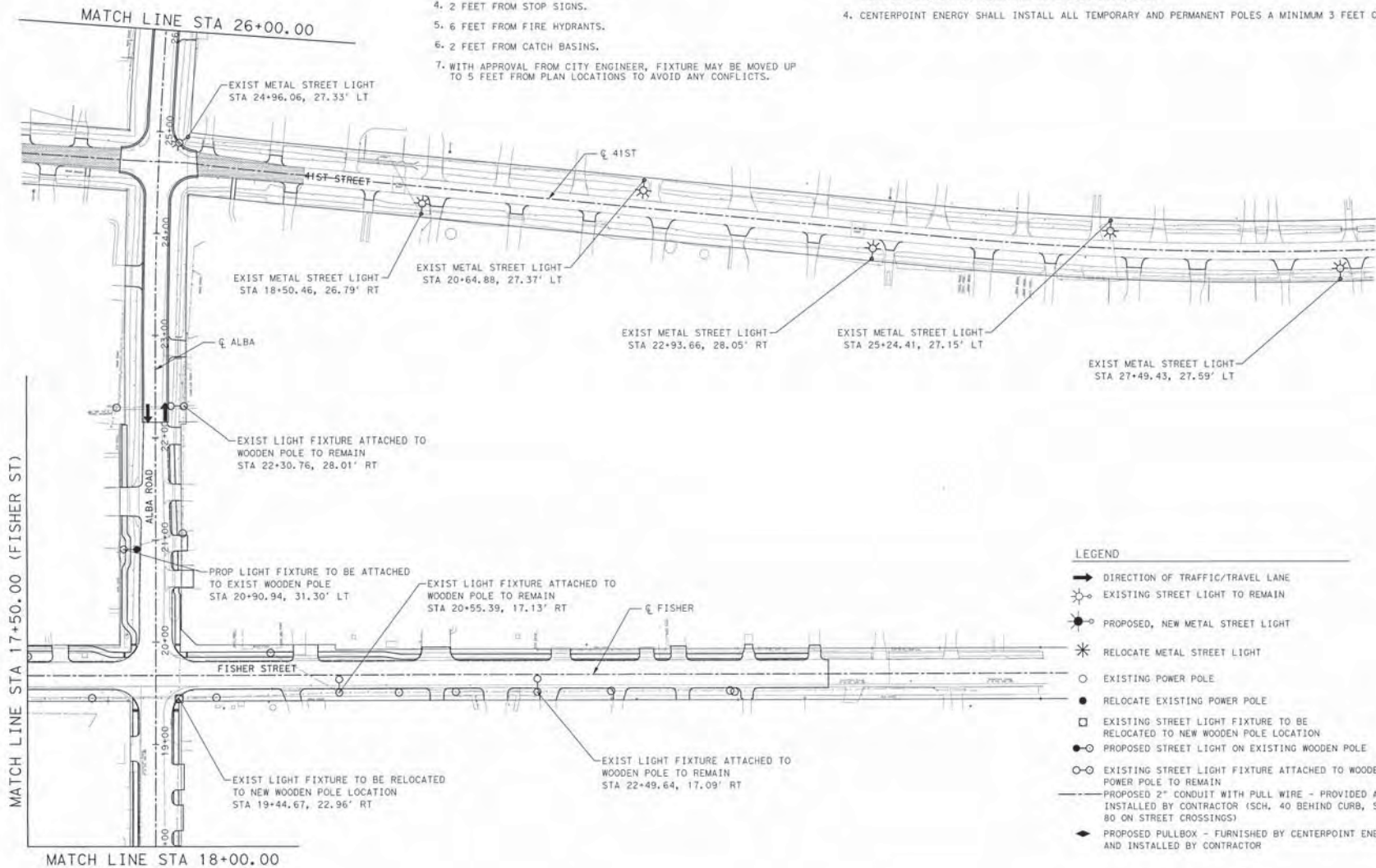
DATE: 6/16/2015 1:29:28 PM
 DRAWING: 04-0200000 D:\04\020000\04-020000-001-522-800.dwg

FIXTURE INSTALLATION NOTES:

- FIXTURES SHOULD BE INSTALLED AS FOLLOWS:
1. 3 FEET BACK OF ROADWAY CURB, WHEREVER POSSIBLE.
 2. 4 FEET OFF DRIVEWAYS.
 3. 2 FEET OFF POINTS OF TANGENT.
 4. 2 FEET FROM STOP SIGNS.
 5. 6 FEET FROM FIRE HYDRANTS.
 6. 2 FEET FROM CATCH BASINS.
 7. WITH APPROVAL FROM CITY ENGINEER, FIXTURE MAY BE MOVED UP TO 5 FEET FROM PLAN LOCATIONS TO AVOID ANY CONFLICTS.

NOTES:

1. CENTERPOINT ENERGY IS RESPONSIBLE FOR RELOCATION OF POWER POLES AND STREET LIGHTS.
2. REMOVAL AND TRANSPORTATION COSTS OF ALL RELOCATED POWER AND LIGHT POLES AND ASSOCIATED ACCESSORIES SHALL BE BY OTHERS.
3. POLES AND OTHER DEVICES SHALL NOT BE REMOVED UNTIL TEMPORARY OR PERMANENT REPLACEMENT POLES, SIGNS, TRAFFIC SIGNALS AND LIGHTING HAVE BEEN INSTALLED.
4. CENTERPOINT ENERGY SHALL INSTALL ALL TEMPORARY AND PERMANENT POLES A MINIMUM 3 FEET CLEAR FROM THE FACE OF CURB.



LEGEND

- ➔ DIRECTION OF TRAFFIC/TRAVEL LANE
- ☼ EXISTING STREET LIGHT TO REMAIN
- ☼* PROPOSED, NEW METAL STREET LIGHT
- * RELOCATE METAL STREET LIGHT
- EXISTING POWER POLE
- RELOCATE EXISTING POWER POLE
- EXISTING STREET LIGHT FIXTURE TO BE RELOCATED TO NEW WOODEN POLE LOCATION
- ◻ PROPOSED STREET LIGHT ON EXISTING WOODEN POLE
- ◻○ EXISTING STREET LIGHT FIXTURE ATTACHED TO WOODEN POWER POLE TO REMAIN
- PROPOSED 2" CONDUIT WITH PULL WIRE - PROVIDED AND INSTALLED BY CONTRACTOR (SCH. 40 BEHIND CURB, SCH. 80 ON STREET CROSSINGS)
- ◆ PROPOSED PULLBOX - FURNISHED BY CENTERPOINT ENERGY AND INSTALLED BY CONTRACTOR



PGAL
 13195 955
 SUITE 200
 5131 BIRMGHAM, SUITE 200
 HOUSTON, TEXAS 77042
 PHONE (713) 622-1444
 FAX (713) 968-9333

STATE OF TEXAS
 COSTAS K. CEDERSTROM
 34555
 LICENSED SURVEYOR
 11111

SURVEYED BY: LANDTECH
 FB NO.: P-15376

CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING
 STREET LIGHTING PLAN
 ALBA ROAD
 STA 18+00 TO STA 26+00
 SHEET 2 OF 5

WBS NUMBER	M-000285-0001-4
DRAWING SCALE	1"=50'
CITY OF HOUSTON PM	JEFFREY T. HALL, P.E.
SHEET NO. 270 OF 385	55634

DATE: 01/13/2016 7:07:18 AM
 PLOT: 01/13/2016 2:00:00 PM D:\c\c\m\1074_5102.dwg

FIXTURE INSTALLATION NOTES:

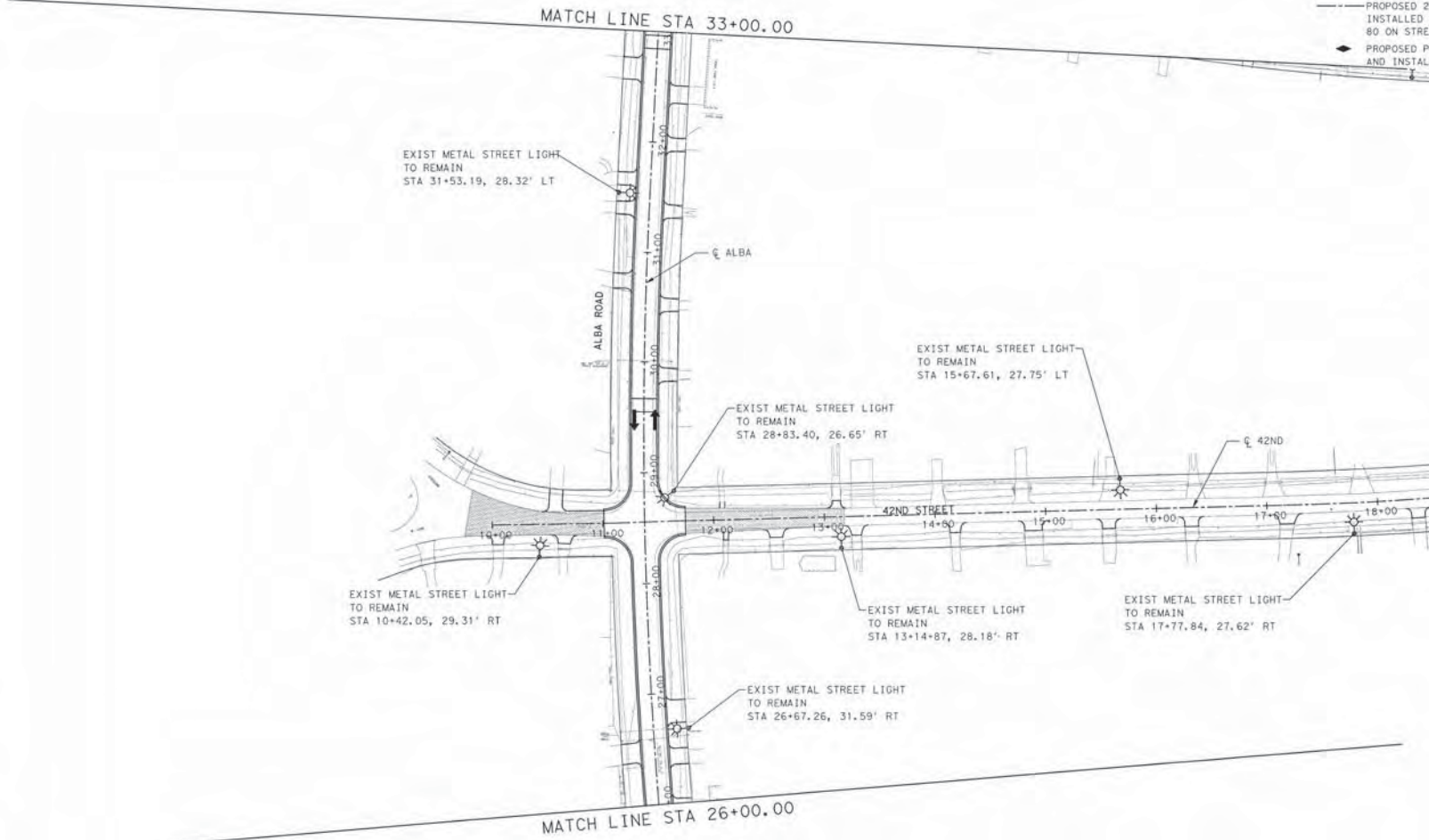
- FIXTURES SHOULD BE INSTALLED AS FOLLOWS:
1. 3 FEET BACK OF ROADWAY CURB, WHEREVER POSSIBLE.
 2. 4 FEET OFF DRIVEWAYS.
 3. 2 FEET OFF POINTS OF TANGENT.
 4. 2 FEET FROM STOP SIGNS.
 5. 6 FEET FROM FIRE HYDRANTS.
 6. 2 FEET FROM CATCH BASINS.
 7. WITH APPROVAL FROM CITY ENGINEER, FIXTURE MAY BE MOVED UP TO 5 FEET FROM PLAN LOCATIONS TO AVOID ANY CONFLICTS.

NOTES:

1. CENTERPOINT ENERGY IS RESPONSIBLE FOR RELOCATION OF POWER POLES AND STREET LIGHTS.
2. REMOVAL AND TRANSPORTATION COSTS OF ALL RELOCATED POWER AND LIGHT POLES AND ASSOCIATED ACCESSORIES SHALL BE BY OTHERS.
3. POLES AND OTHER DEVICES SHALL NOT BE REMOVED UNTIL TEMPORARY OR PERMANENT REPLACEMENT POLES, SIGNS, TRAFFIC SIGNALS AND LIGHTING HAVE BEEN INSTALLED.
4. CENTERPOINT ENERGY SHALL INSTALL ALL TEMPORARY AND PERMANENT POLES A MINIMUM 3 FEET CLEAR FROM THE FACE OF CURB.

LEGEND

- ➔ DIRECTION OF TRAFFIC/TRAVEL LANE
- ☼ EXISTING STREET LIGHT TO REMAIN
- ☼* PROPOSED, NEW METAL STREET LIGHT
- * RELOCATE METAL STREET LIGHT
- EXISTING POWER POLE
- RELOCATE EXISTING POWER POLE
- EXISTING STREET LIGHT FIXTURE TO BE RELOCATED TO NEW WOODEN POLE LOCATION
- PROPOSED STREET LIGHT ON EXISTING WOODEN POLE
- EXISTING STREET LIGHT FIXTURE ATTACHED TO WOODEN POWER POLE TO REMAIN
- PROPOSED 2" CONDUIT WITH PULL WIRE - PROVIDED AND INSTALLED BY CONTRACTOR (SCH. 40 BEHIND CURB, SCH. 80 ON STREET CROSSINGS)
- ◆ PROPOSED PULLBOX - FURNISHED BY CENTERPOINT ENERGY AND INSTALLED BY CONTRACTOR



PGAL
 3111 BRIDGEMAN, SUITE 200
 HOUSTON, TEXAS 77042
 PHONE (713) 622-1444
 FAX (713) 668-9333

STATE OF TEXAS
 COSTAS L. GERARDINO
 1985
 LICENSED PROFESSIONAL ENGINEER

SURVEYED BY: LANDTECH
 P-3576

CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING
 STREET LIGHTING PLAN
 ALBA ROAD
 STA 26+00 TO STA 33.00
 SHEET 3 OF 5

WBS NUMBER	M-000285-0001-4
DRAWING SCALE	1"=50'
CITY OF HOUSTON PM	JEFFREY T. HALL, P.E.
SHEET NO. 271 OF 385	55630

DATE: 04/20/05, 7:07A M, PROJECT: M-000285-0001-0001, DRAWING: 004_303_Alt0.dwg

NOTES:

1. CENTERPOINT ENERGY IS RESPONSIBLE FOR RELOCATION OF POWER POLES AND STREET LIGHTS.
2. REMOVAL AND TRANSPORTATION COSTS OF ALL RELOCATED POWER AND LIGHT POLES AND ASSOCIATED ACCESSORIES SHALL BE BY OTHERS.
3. POLES AND OTHER DEVICES SHALL NOT BE REMOVED UNTIL TEMPORARY OR PERMANENT REPLACEMENT POLES, SIGNS, TRAFFIC SIGNALS AND LIGHTING HAVE BEEN INSTALLED.
4. CENTERPOINT ENERGY SHALL INSTALL ALL TEMPORARY AND PERMANENT POLES A MINIMUM 3 FEET CLEAR FROM THE FACE OF CURB.

FIXTURE INSTALLATION NOTES:

- FIXTURES SHOULD BE INSTALLED AS FOLLOWS:
1. 3 FEET BACK OF ROADWAY CURB, WHEREVER POSSIBLE.
 2. 4 FEET OFF DRIVEWAYS.
 3. 2 FEET OFF POINTS OF TANGENT.
 4. 2 FEET FROM STOP SIGNS.
 5. 6 FEET FROM FIRE HYDRANTS.
 6. 2 FEET FROM CATCH BASINS.
 7. WITH APPROVAL FROM CITY ENGINEER, FIXTURE MAY BE MOVED UP TO 5 FEET FROM PLAN LOCATIONS TO AVOID ANY CONFLICTS.

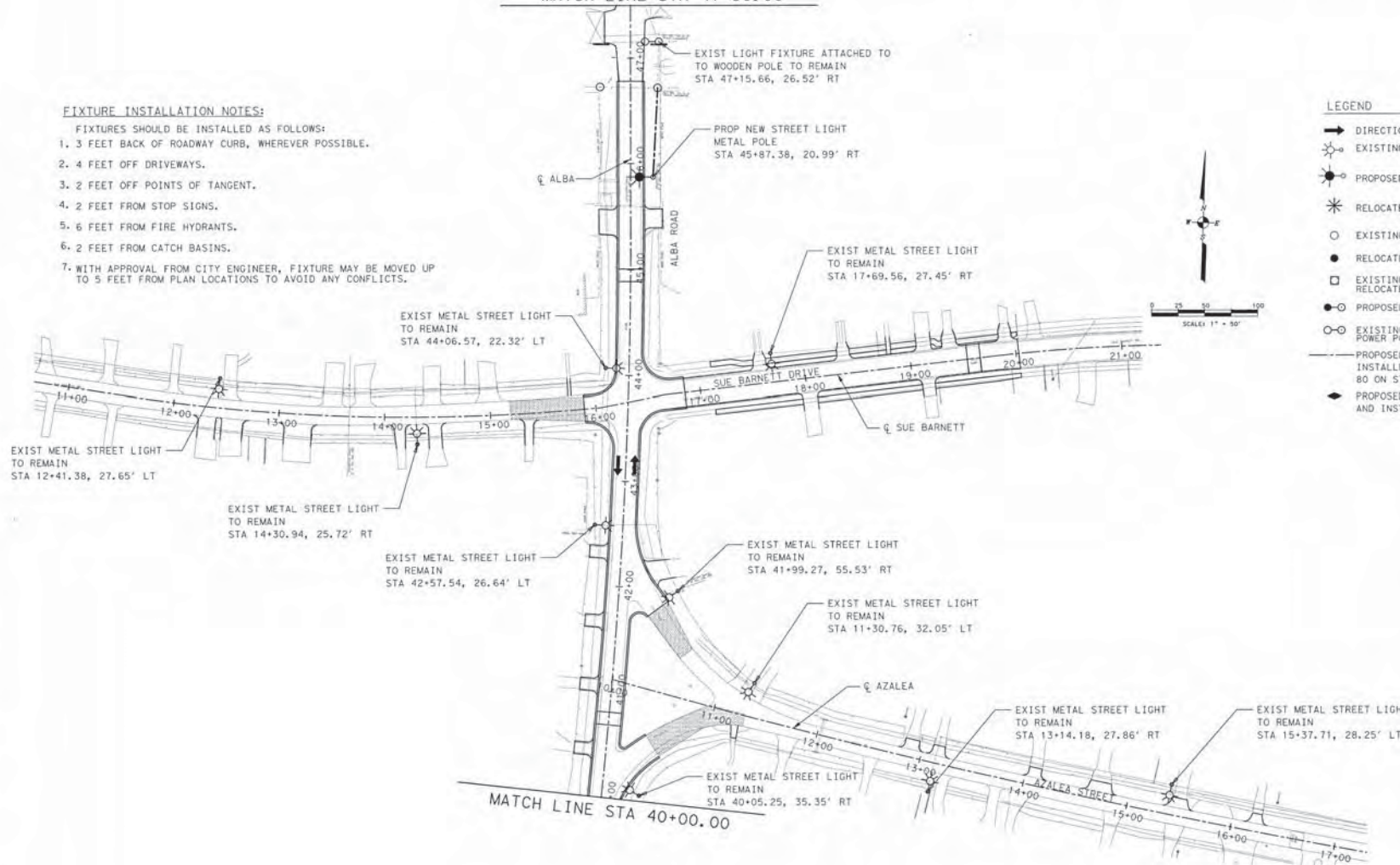
LEGEND

- ➔ DIRECTION OF TRAFFIC/TRAVEL LANE
- ☼ EXISTING STREET LIGHT TO REMAIN
- EXISTING METAL STREET LIGHT
- ✳ RELOCATE METAL STREET LIGHT
- EXISTING POWER POLE
- RELOCATE EXISTING POWER POLE
- EXISTING STREET LIGHT FIXTURE TO BE RELOCATED TO NEW WOODEN POLE LOCATION
- EXISTING STREET LIGHT ON EXISTING WOODEN POLE
- EXISTING STREET LIGHT FIXTURE ATTACHED TO WOODEN POWER POLE TO REMAIN
- PROPOSED 2" CONDUIT WITH PULL WIRE - PROVIDED AND INSTALLED BY CONTRACTOR (SCH. 40 BEHIND CURB, SCH. 80 ON STREET CROSSINGS)
- ◆ PROPOSED PULLBOX - FURNISHED BY CENTERPOINT ENERGY AND INSTALLED BY CONTRACTOR



MATCH LINE STA 47+50.00

MATCH LINE STA 40+00.00



DATE: 04/15/2015 10:05 AM
DRAWN BY: C. GARDNER
CHECKED BY: J. HALL



PGAL
 ENGINEERS
 3131 BRADSHAW, SUITE 200
 HOUSTON, TEXAS 77042
 PHONE (713) 652-1444
 FAX (713) 988-9333



SURVEYED BY: LANDTECH
 FB NO. P-3874

CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING
 STREET LIGHTING PLAN
 ALBA ROAD
 STA 40+00 TO STA 47+50
 SHEET 5 OF 5

WBS NUMBER	M-000285-0001-4
DRAWING SCALE	1"=50'
CITY OF HOUSTON PM	JEFFREY T. HALL, P.E.
SHEET NO.	275 OF 385

55650

FIXTURE INSTALLATION NOTES:

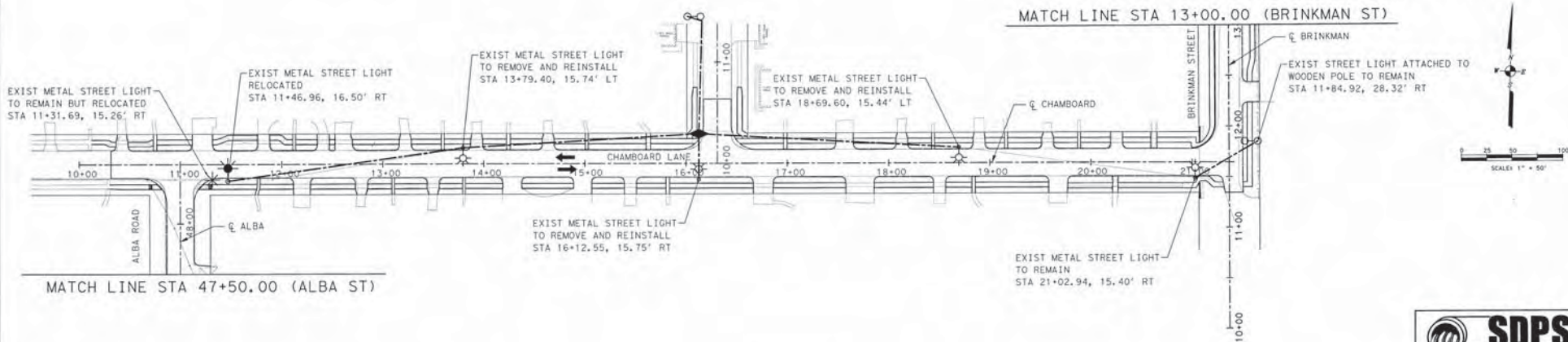
- FIXTURES SHOULD BE INSTALLED AS FOLLOWS:
1. 3 FEET BACK OF ROADWAY CURB, WHEREVER POSSIBLE.
 2. 4 FEET OFF DRIVEWAYS.
 3. 2 FEET OFF POINTS OF TANGENT.
 4. 2 FEET FROM STOP SIGNS.
 5. 6 FEET FROM FIRE HYDRANTS.
 6. 2 FEET FROM CATCH BASINS.
 7. WITH APPROVAL FROM CITY ENGINEER, FIXTURE MAY BE MOVED UP TO 5 FEET FROM PLAN LOCATIONS TO AVOID ANY CONFLICTS.

NOTES:

1. CENTERPOINT ENERGY IS RESPONSIBLE FOR RELOCATION OF POWER POLES AND STREET LIGHTS.
2. REMOVAL AND TRANSPORTATION COSTS OF ALL RELOCATED POWER AND LIGHT POLES AND ASSOCIATED ACCESSORIES SHALL BE BY OTHERS.
3. POLES AND OTHER DEVICES SHALL NOT BE REMOVED UNTIL TEMPORARY OR PERMANENT REPLACEMENT POLES, SIGNS, TRAFFIC SIGNALS AND LIGHTING HAVE BEEN INSTALLED.
4. CENTERPOINT ENERGY SHALL INSTALL ALL TEMPORARY AND PERMANENT POLES A MINIMUM 3 FEET CLEAR FROM THE FACE OF CURB.

LEGEND

- ➔ DIRECTION OF TRAFFIC/TRAVEL LANE
- ☉ EXISTING STREET LIGHT TO REMAIN
- ☉* PROPOSED, NEW METAL STREET LIGHT
- * RELOCATE METAL STREET LIGHT
- EXISTING POWER POLE
- RELOCATE EXISTING POWER POLE
- EXISTING STREET LIGHT FIXTURE TO BE RELOCATED TO NEW WOODEN POLE LOCATION
- PROPOSED STREET LIGHT ON EXISTING WOODEN POLE
- EXISTING STREET LIGHT FIXTURE ATTACHED TO WOODEN POWER POLE TO REMAIN
- PROPOSED 2" CONDUIT WITH PULL WIRE - PROVIDED AND INSTALLED BY CONTRACTOR (SCH. 40 BEHIND CURB, SCH. 80 ON STREET CROSSINGS)
- ◆ PROPOSED PULL BOX - FURNISHED BY CENTERPOINT ENERGY AND INSTALLED BY CONTRACTOR



<small> 3131 BRINKMAN, SUITE 200 HOUSTON, TEXAS 77042 PHONE (713) 622-1444 FAX (713) 960-9333 </small>	
<small> SUPERVISED BY: LANDTECH P.E. NO. P-3578 </small>	
CITY OF HOUSTON DEPARTMENT OF PUBLIC WORKS AND ENGINEERING	
GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING	
STREET LIGHTING PLAN CHAMBOARD LANE SHEET 1 OF 1	
WBS NUMBER M-000285-0001-4	
DRAWING SCALE 1"=50'	
CITY OF HOUSTON PM JEFFREY T. HALL, P.E. SHEET NO. 274 OF 385	

DATE: 01/14/2014 10:29:24 AM
 AUTOCAD: C:\DWGFILES\2014\01\01\0001\DWG\CHAMBOARD_LANE_SLDWG.dwg

FIXTURE INSTALLATION NOTES:

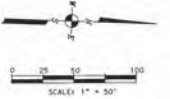
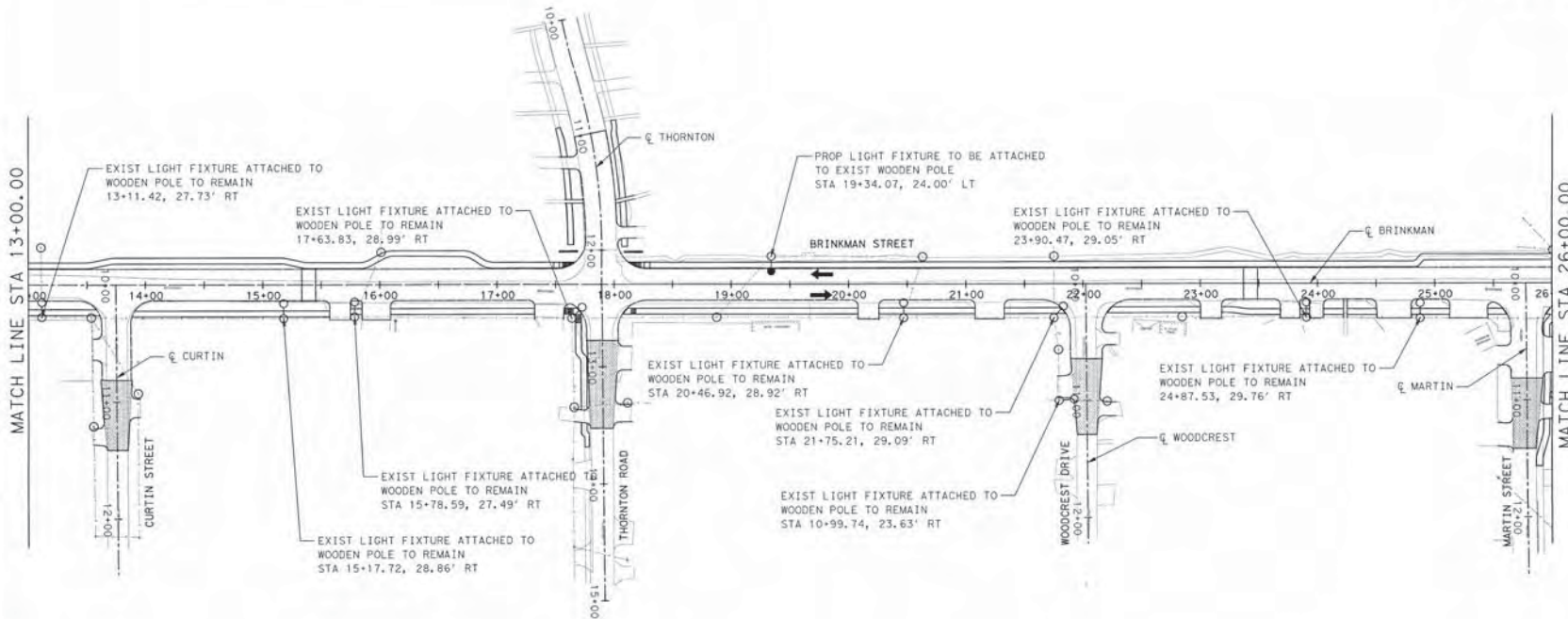
- FIXTURES SHOULD BE INSTALLED AS FOLLOWS:
1. 3 FEET BACK OF ROADWAY CURB, WHEREVER POSSIBLE.
 2. 4 FEET OFF DRIVEWAYS.
 3. 2 FEET OFF POINTS OF TANGENT.
 4. 2 FEET FROM STOP SIGNS.
 5. 6 FEET FROM FIRE HYDRANTS.
 6. 2 FEET FROM CATCH BASINS.
 7. WITH APPROVAL FROM CITY ENGINEER, FIXTURE MAY BE MOVED UP TO 5 FEET FROM PLAN LOCATIONS TO AVOID ANY CONFLICTS.

NOTES:

1. CENTERPOINT ENERGY IS RESPONSIBLE FOR RELOCATION OF POWER POLES AND STREET LIGHTS.
2. REMOVAL AND TRANSPORTATION COSTS OF ALL RELOCATED POWER AND LIGHT POLES AND ASSOCIATED ACCESSORIES SHALL BE BY OTHERS.
3. POLES AND OTHER DEVICES SHALL NOT BE REMOVED UNTIL TEMPORARY OR PERMANENT REPLACEMENT POLES, SIGNS, TRAFFIC SIGNALS AND LIGHTING HAVE BEEN INSTALLED.
4. CENTERPOINT ENERGY SHALL INSTALL ALL TEMPORARY AND PERMANENT POLES A MINIMUM 3 FEET CLEAR FROM THE FACE OF CURB.

LEGEND

- DIRECTION OF TRAFFIC/TRAVEL LANE
- ☉ EXISTING STREET LIGHT TO REMAIN
- ⊙ PROPOSED, NEW METAL STREET LIGHT
- * RELOCATE METAL STREET LIGHT
- EXISTING POWER POLE
- RELOCATE EXISTING POWER POLE
- EXISTING STREET LIGHT FIXTURE TO BE RELOCATED TO NEW WOODEN POLE LOCATION
- PROPOSED STREET LIGHT ON EXISTING WOODEN POLE
- EXISTING STREET LIGHT FIXTURE ATTACHED TO WOODEN POWER POLE TO REMAIN
- PROPOSED 2" CONDUIT WITH PULL WIRE - PROVIDED AND INSTALLED BY CONTRACTOR (SCH. 40 BEHIND CURB, SCH. 80 ON STREET CROSSINGS)
- ◆ PROPOSED PULLBOX - FURNISHED BY CENTERPOINT ENERGY AND INSTALLED BY CONTRACTOR



DATE: 10/20/05, TYPED BY: M, APPROVED BY: J, DRAWN BY: J, CHECKED BY: J, SCALE: AS SHOWN

<p>3131 BRIMMING, SUITE 200 Houston, Texas 77042 Phone (713) 622-1444 Fax (713) 960-9333</p>	
<p>SURVEYED BY: LANDTECH FB NO. 10-001</p>	
<p>CITY OF HOUSTON DEPARTMENT OF PUBLIC WORKS AND ENGINEERING</p>	
<p>GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING</p>	
<p>STREET LIGHTING PLAN BRINKMAN STREET STA 13+00 TO STA 26+00 SHEET 1 OF 2</p>	
<p>WBS NUMBER M-000285-0001-4</p>	<p>DRAWING SCALE 1"=50'</p>
<p>CITY OF HOUSTON PM JEFFREY T. HALL, P.E. SHEET NO. 275 OF 385</p>	<p>556 & U</p>

FIXTURE INSTALLATION NOTES:

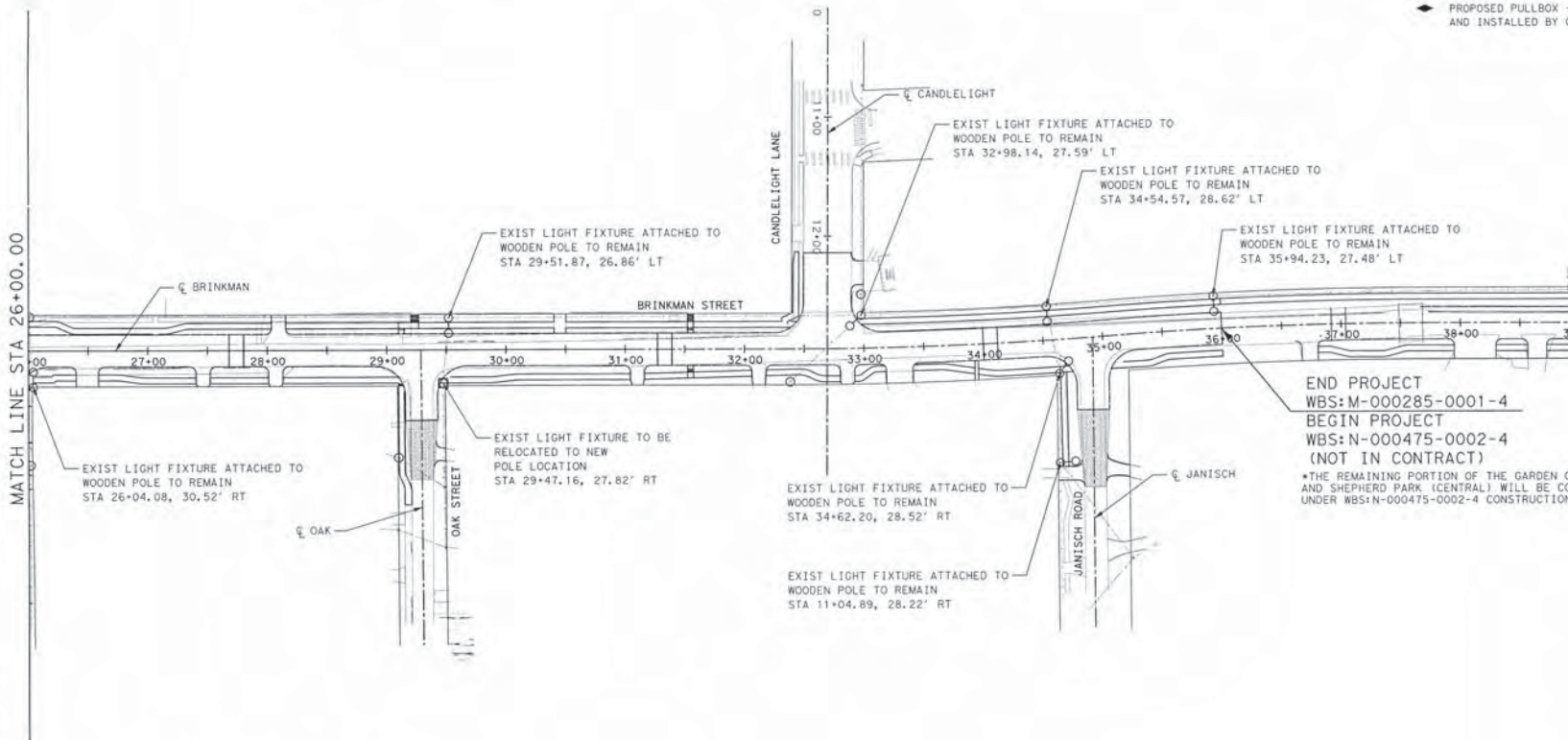
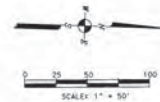
- FIXTURES SHOULD BE INSTALLED AS FOLLOWS:
1. 3 FEET BACK OF ROADWAY CURB, WHEREVER POSSIBLE.
 2. 4 FEET OFF DRIVEWAYS.
 3. 2 FEET OFF POINTS OF TANGENT.
 4. 2 FEET FROM STOP SIGNS.
 5. 6 FEET FROM FIRE HYDRANTS.
 6. 2 FEET FROM CATCH BASINS.
 7. WITH APPROVAL FROM CITY ENGINEER, FIXTURE MAY BE MOVED UP TO 5 FEET FROM PLAN LOCATIONS TO AVOID ANY CONFLICTS.

NOTES:

1. CENTERPOINT ENERGY IS RESPONSIBLE FOR RELOCATION OF POWER POLES AND STREET LIGHTS.
2. REMOVAL AND TRANSPORTATION COSTS OF ALL RELOCATED POWER AND LIGHT POLES AND ASSOCIATED ACCESSORIES SHALL BE BY OTHERS.
3. POLES AND OTHER DEVICES SHALL NOT BE REMOVED UNTIL TEMPORARY OR PERMANENT REPLACEMENT POLES, SIGNS, TRAFFIC SIGNALS AND LIGHTING HAVE BEEN INSTALLED.
4. CENTERPOINT ENERGY SHALL INSTALL ALL TEMPORARY AND PERMANENT POLES A MINIMUM 3 FEET CLEAR FROM THE FACE OF CURB.

LEGEND

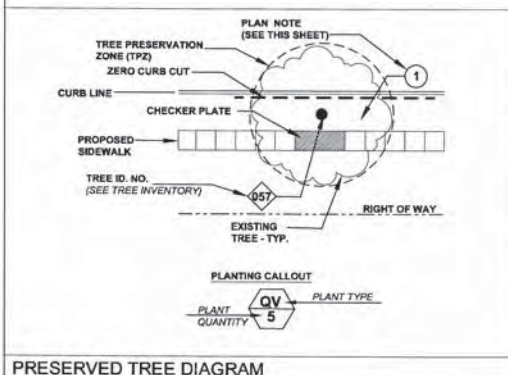
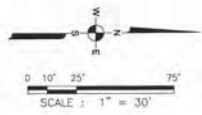
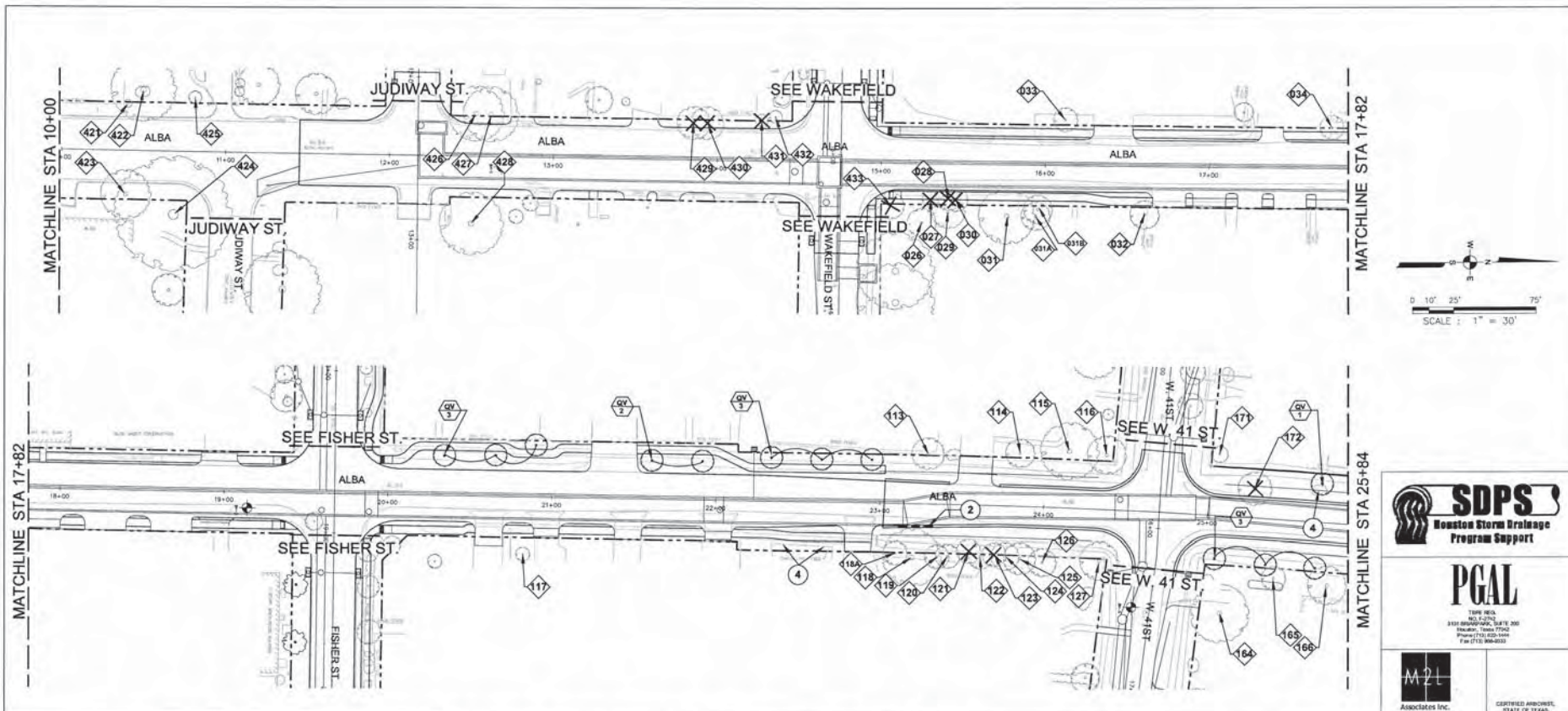
- ➔ DIRECTION OF TRAFFIC/TRAVEL LANE
- ☉ EXISTING STREET LIGHT TO REMAIN
- ☉ PROPOSED, NEW METAL STREET LIGHT
- ✳ RELOCATE METAL STREET LIGHT
- EXISTING POWER POLE
- RELOCATE EXISTING POWER POLE
- EXISTING STREET LIGHT FIXTURE TO BE RELOCATED TO NEW WOODEN POLE LOCATION
- PROPOSED STREET LIGHT ON EXISTING WOODEN POLE
- EXISTING STREET LIGHT FIXTURE ATTACHED TO WOODEN POWER POLE TO REMAIN
- PROPOSED 2" CONDUIT WITH PULL WIRE - PROVIDED AND INSTALLED BY CONTRACTOR (SCH. 40 BEHIND CURB, SCH. 80 ON STREET CROSSINGS)
- ◆ PROPOSED PULLBOX - FURNISHED BY CENTERPOINT ENERGY AND INSTALLED BY CONTRACTOR



END PROJECT
WBS: M-000285-0001-4
BEGIN PROJECT
WBS: N-000475-0002-4
(NOT IN CONTRACT)
*THE REMAINING PORTION OF THE GARDEN OAKS AND SHEPHERD PARK (CENTRAL) WILL BE CONSTRUCTED UNDER WBS: N-000475-0002-4 CONSTRUCTION PLANS

DATE: 9/20/2005 1:05:59 AM
PROJECT: C:\WORK\2005\09\20050920\0001\0001\0001\0001.dwg
DRAWN BY: JTH

<p>CITY OF HOUSTON DEPARTMENT OF PUBLIC WORKS AND ENGINEERING</p>	
<p>GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING</p>	
<p>STREET LIGHTING PLAN STA 26+00 TO STA END SHEET 2 OF 2</p>	
<p>WBS NUMBER M-000285-0001-4</p>	<p>556 U</p>
<p>DRAWING SCALE 1"=50'</p>	
<p>CITY OF HOUSTON PM JEFFREY T. HALL, P.E. SHEET NO. 276 OF 385</p>	



- GENERAL NOTES**
- CONTRACTOR SHALL SEEK PRIOR APPROVAL FROM THE ARBORIST, CITY URBAN FORESTER, AND CITY'S REPRESENTATIVE PRIOR TO INITIATION OF TREE REMOVAL AND/OR TREE PROTECTION ACTIVITIES WITHIN THE PROJECT SCOPE OF WORK. IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE CITY OF HOUSTON.
 - IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INSURE THAT NO DAMAGE TO EXISTING TREES TO BE PROTECTED AND/OR THOSE THAT HAVE THEIR TRUNKS OUTSIDE OF THE PROJECT LIMITS BUT HAVE SIGNIFICANT BRANCH OVERHANG INTO THE PROJECT LIMITS.
 - THE CONTRACTOR SHALL NOT, AT ANY TIME, PARK CONSTRUCTION VEHICLES, MATERIALS, OR EQUIPMENT INSIDE OF THE TREE PROTECTION ZONE (TPZ) OF TREES TO BE PROTECTED.
 - SEE TREE PRESERVATION DETAILS AND SPECIFICATIONS FOR DISPOSITION AND CONDITIONAL TREATMENT OF TREES NOTED ON THE DRAWINGS.
 - ALL NOTED TREES ON DRAWINGS MAY REQUIRE ADDITIONAL CONDITIONAL TREATMENT OTHER THAN NOTED ON THE PLANS. SEE TREE INVENTORY AND TREE PRESERVATION DETAILS (ALL TREE PRESERVATION WORK REQUIRED HEREIN IS INCIDENTAL TO 01562 UNLESS OTHERWISE NOTED).
 - CONTRACTOR TO PROVIDE WATER, TREATMENT FOR BORERS AND OTHER INSECTICIDE TREATMENTS FOR TREES TO BE PRESERVED AS NEEDED PER ARBORIST'S RECOMMENDATION. (INCIDENTAL TO 01562 AND 02915 AND NOT PAID FOR SEPARATELY.)
 - PROPOSED TREES SHALL BE PLANTED A MINIMUM OF 5'-0" FROM BACK OF CURB AND NO CLOSER THAN 20' O.C. FROM EACH OTHER. TREE MITIGATION PLACEMENT DISTANCES FROM MEDIAN TIP ENDS SHALL BE 50'-0" AT NON-SIGNALIZED INTERSECTIONS, AND 75'-0" AT SIGNALIZED INTERSECTIONS.
 - ALL TREE MITIGATION MATERIALS AND LABOR REQUIRED TO PROVIDE AND INSTALL THE PROPOSED TREES SHALL BE INCIDENTAL TO 02915 - TREE PLANTING.
 - CONTRACTOR TO SUBMIT MEANS AND METHODS OF WATERING PROCEDURES FOR NEWLY PLANTED TREES TO ARBORIST FOR REVIEW AND APPROVAL.
 - CONTRACTOR TO WARRANT, PROVIDE WATER, AND MAINTENANCE FOR ALL NEWLY PLANTED TREES FOR A PERIOD OF TWO (2) YEARS FROM DATE OF SUBSTANTIAL COMPLETION TO SUSTAIN HEALTH OF TREE. (INCIDENTAL TO 02915 - TREE PLANTING AND NOT PAID FOR SEPARATELY.)
 - CONTRACTOR TO EXERCISE CAUTION WHEN WORKING AROUND ALL EXISTING TREES REGARDLESS OF SPECIFIC MEASURES THAT ARE NOTED ON THESE PLANS AND DETAILS AT ALL TIMES AND TO THE EXTENT REQUIRED BY THE CONTRACT DOCUMENTS, SPECIFICALLY 01562.

- PLAN NOTES**
- PROVIDE CHECKER PLATE OVER ROOT FLARE SEE DETAIL 1, SHEET 306.
 - PROVIDE ZERO CURB CUT CONTINUOUS SEE DETAIL 4, SHEET 305.
 - UNDEVELOPED PROPERTY - TREE REMOVAL AREA - NO MITIGATION REQUIRED. (INCIDENTAL TO CLEARING AND GRUBBING AND NOT PAID FOR SEPARATELY. SEE ENGINEERING PLANS FOR MORE INFORMATION.)
 - REMOVE SHRUB(S) AS NEEDED TO ACCOMMODATE PROPOSED IMPROVEMENTS (INCIDENTAL TO 01562)
 - REDUCE SIDEWALK WIDTH TO 4'-0" AND ADJUST PROPOSED SIDEWALK ("BUMP OUT") AT EXISTING TREE ROOT FLARE (INCIDENTAL AND NOT PAID FOR SEPARATELY)
- PROPOSED PLANTING: CONTRACTOR SHALL MARK TREE LOCATIONS PRIOR TO PLANTING FOR APPROVAL BY CITY FORESTER AND CITY ENGINEER**
- | TYPE | ABR. | BOTANICAL NAME | COMMON NAME | PLANTED SIZE |
|------|------|----------------------|-----------------------------------|----------------|
| ○ | QV | QUERCUS VIRGINIANA | LIVE OAK | 4" CAL. MIN. |
| ○ | UC | ULMUS CRASSIFOLIA | CEDAR ELM | 4" CAL. MIN. |
| ○ | LJ | LAGERSTROEMIA INDICA | CREPE MYRTLE | 3" MULTI TRUNK |
| ✕ | | | REMOVE TREE (INCIDENTAL TO 01562) | |
- *SEE PLANT LIST ON TREE PRESERVATION DETAILS FOR MORE INFORMATION



PGAL
THE REG. NO. 12700
 3107 BRIDGEWAY, SUITE 200
 HOUSTON, TEXAS 77052
 PHONE (713) 852-1000
 FAX (713) 852-0033



M2L Associates Inc.
REGISTERED PROFESSIONAL ENGINEER
 LICENSE NO. 10428
 10000 WESTHELIAN DRIVE
 HOUSTON, TEXAS 77036
 PHONE (713) 852-1000
 FAX (713) 852-0033

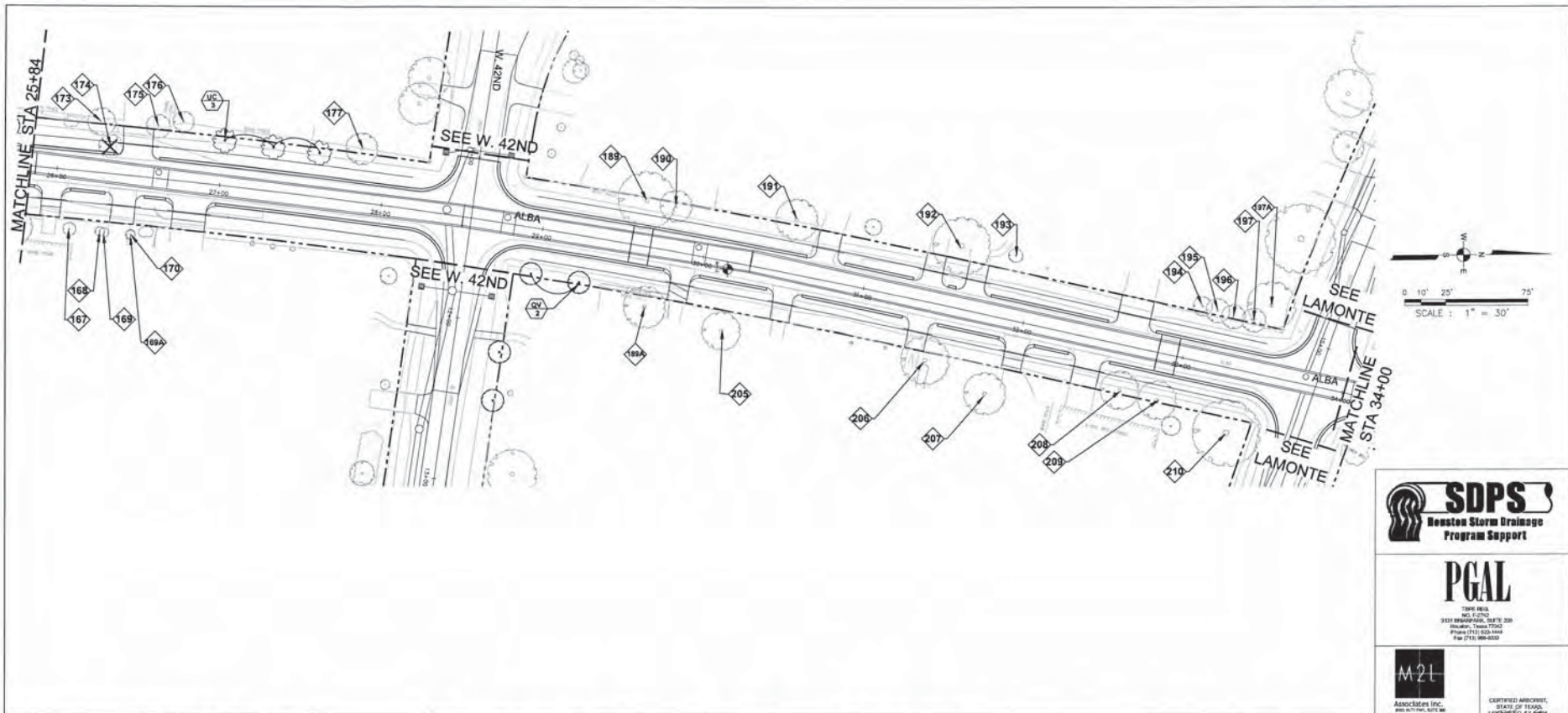


CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

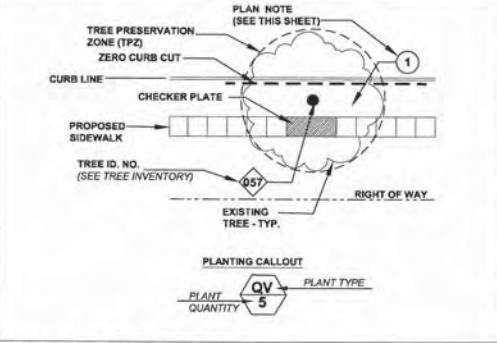
GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

TREE PRESERVATION PLANS
 ALBA ST.
 STA: 10+00 TO 25+84

WBS NUMBER	
M-000395-001-4	
DRAWING SCALE	
SCALE: 1" = 30'-0"	
CITY OF HOUSTON PM	
JEFFREY T. WALL, P.E.	
DATE	SHEET NO.
02/28/15	278 OF 365



CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING
TREE PRESERVATION PLANS
 ALBA ST.
 STA: 25+84 TO 33+98



PRESERVED TREE DIAGRAM

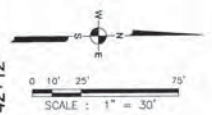
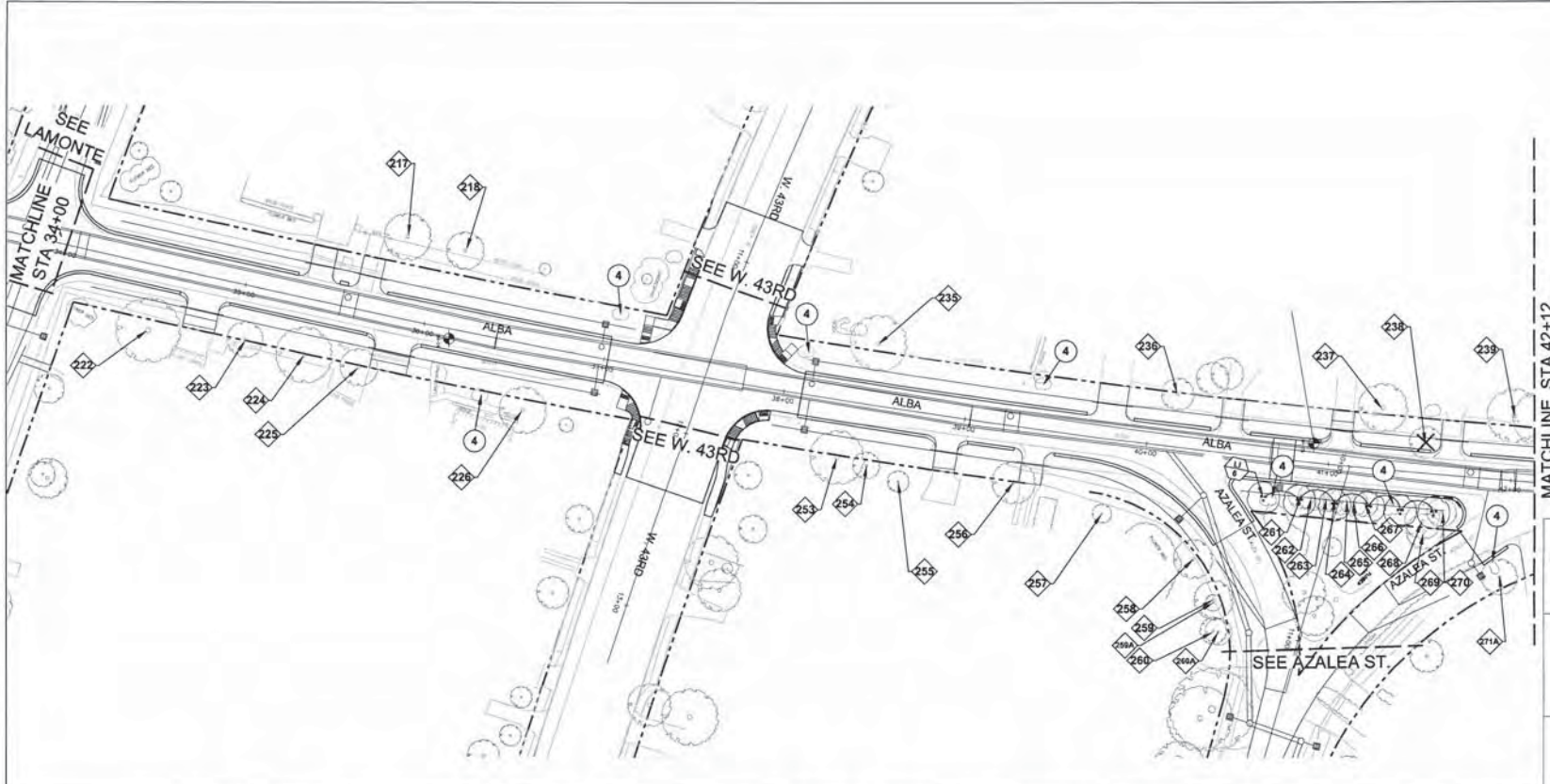
- GENERAL NOTES**
- CONTRACTOR SHALL SEEK PRIOR APPROVAL FROM THE ARBORIST, CITY URBAN FORESTER, AND CITY'S REPRESENTATIVE PRIOR TO INITIATION OF TREE REMOVAL AND/OR TREE PROTECTION ACTIVITIES WITHIN THE PROJECT SCOPE OF WORK. IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE CITY OF HOUSTON.
 - IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INSURE THAT NO DAMAGE TO EXISTING TREES TO BE PROTECTED AND/OR THOSE THAT HAVE THEIR TRUNKS OUTSIDE OF THE PROJECT LIMITS BUT HAVE SIGNIFICANT BRANCH OVERHANGING INTO THE PROJECT LIMITS.
 - THE CONTRACTOR SHALL NOT, AT ANY TIME, PARK CONSTRUCTION VEHICLES, MATERIALS, OR EQUIPMENT INSIDE OF THE TREE PROTECTION ZONE (TPZ) OF TREES TO BE PROTECTED.
 - SEE TREE PRESERVATION DETAILS AND SPECIFICATIONS FOR DISPOSITION AND CONDITIONAL TREATMENT OF TREES NOTED ON THE DRAWINGS.
 - ALL NOTED TREES ON DRAWINGS MAY REQUIRE ADDITIONAL CONDITIONAL TREATMENT OTHER THAN NOTED ON THE PLANS. SEE TREE INVENTORY AND TREE PRESERVATION DETAILS (ALL TREE PRESERVATION WORK REQUIRED HEREIN IS INCIDENTAL TO 01562 UNLESS OTHERWISE NOTED).
 - CONTRACTOR TO PROVIDE WATER, TREATMENT FOR BORERS AND OTHER INSECTICIDE TREATMENTS FOR TREES TO BE PRESERVED AS NEEDED PER ARBORIST'S RECOMMENDATION. (INCIDENTAL TO 01562 AND 02915 AND NOT PAID FOR SEPARATELY.)
 - PROPOSED TREE SHALL BE PLANTED A MINIMUM OF 5'-0" FROM BACK OF CURB AND NO CLOSER THAN 20' O.C. FROM EACH OTHER. TREE MITIGATION PLACEMENT DISTANCES FROM MEDIAN TIP ENDS SHALL BE 50' AT NON-SIGNALIZED INTERSECTIONS, AND 75' AT SIGNALIZED INTERSECTIONS.
 - ALL TREE MITIGATION MATERIALS AND LABOR REQUIRED TO PROVIDE AND INSTALL THE PROPOSED TREES SHALL BE INCIDENTAL TO 02915 - TREE PLANTING.
 - CONTRACTOR TO SUBMIT MEANS AND METHODS OF WATERING PROCEDURES FOR NEWLY PLANTED TREES TO ARBORIST FOR REVIEW AND APPROVAL.
 - CONTRACTOR TO WARRANT, PROVIDE WATER, AND MAINTENANCE FOR ALL NEWLY PLANTED TREES FOR A PERIOD OF TWO (2) YEARS FROM DATE OF SUBSTANTIAL COMPLETION TO SUSTAIN HEALTH OF TREE. (INCIDENTAL TO 02915 - TREE PLANTING AND NOT PAID FOR SEPARATELY.)
 - CONTRACTOR TO EXERCISE CAUTION WHEN WORKING AROUND ALL EXISTING TREES REGARDLESS OF SPECIFIC MEASURES THAT ARE NOTED ON THESE PLANS AND DETAILS AT ALL TIMES AND TO THE EXTENT REQUIRED BY THE CONTRACT DOCUMENTS, SPECIFICALLY 01562.

GENERAL NOTES

- PLAN NOTES**
- PROVIDE CHECKER PLATE OVER ROOT FLARE SEE DETAIL 1, SHEET 306.
 - PROVIDE ZERO CURB CUT CONTINUOUS SEE DETAIL 4, SHEET 305.
 - UNDEVELOPED PROPERTY - TREE REMOVAL AREA - NO MITIGATION REQUIRED. (INCIDENTAL TO CLEARING AND GRUBBING AND NOT PAID FOR SEPARATELY. SEE ENGINEERING PLANS FOR MORE INFORMATION.)
 - REMOVE SHRUB(S) AS NEED TO ACCOMMODATE PROPOSED IMPROVEMENTS (INCIDENTAL TO 01562)
 - REDUCE SIDEWALK WIDTH TO 4'-0" AND ADJUST PROPOSED SIDEWALK ("BUMP OUT") AT EXISTING TREE ROOT FLARE (INCIDENTAL AND NOT PAID FOR SEPARATELY)
- PROPOSED PLANTING: CONTRACTOR SHALL MARK TREE LOCATIONS PRIOR TO PLANTING FOR APPROVAL BY CITY FORESTER AND CITY ENGINEER
- | TYPE | ABR. | BOTANICAL NAME | COMMON NAME | PLANTED SIZE |
|------|------|-----------------------------------|--------------|----------------|
| ● | QV | QUERCUS VIRGINIANA | LIVE OAK | 4" CAL. MIN. |
| ● | UC | ULMUS CRASSIFOLIA | CEDAR ELM | 4" CAL. MIN. |
| ● | LI | LAGERSTROEMIA INDICA | CREPE MYRTLE | 3" MULTI TRUNK |
| ⊗ | | REMOVE TREE (INCIDENTAL TO 01562) | | |
- *SEE PLANT LIST ON TREE PRESERVATION DETAILS FOR MORE INFORMATION

PLAN NOTES

ISS NUMBER	M-000285-0001-4
DRAWING SCALE	SCALE: 1" = 30'-0"
CITY OF HOUSTON PM	JEFFREY T. HALL, P.E.
DATE	02/25/15
SHEET NO.	279 OF 385



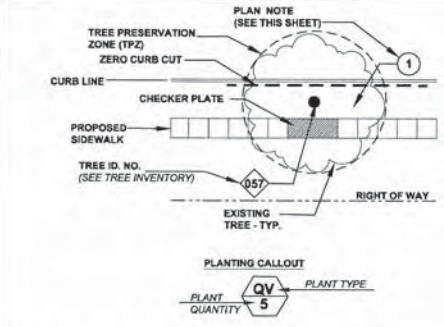
CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

ALBA ST. TREE PRESERVATION PLANS STA: 33+98 TO 42+12

WBS NUMBER	M-000285-0001-4
DRAWING SCALE	SCALE: 1" = 30'-0"
CITY OF HOUSTON PWA	JEFFREY T. HALL, P.E.
DATE	02/28/15
SHEET NO.	280 OF 385

55630



PRESERVED TREE DIAGRAM

- A. CONTRACTOR SHALL SEEK PRIOR APPROVAL FROM THE ARBORIST, CITY URBAN FORESTOR, AND CITY'S REPRESENTATIVE PRIOR TO INITIATION OF TREE REMOVAL AND/OR TREE PROTECTION ACTIVITIES WITHIN THE PROJECT SCOPE OF WORK. IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE CITY OF HOUSTON.
- B. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INSURE THAT NO DAMAGE TO EXISTING TREES TO BE PROTECTED AND/OR THOSE THAT HAVE THEIR TRUNKS OUTSIDE OF THE PROJECT LIMITS BUT HAVE SIGNIFICANT BRANCH OVERHANG INTO THE PROJECT LIMITS.
- C. THE CONTRACTOR SHALL NOT, AT ANY TIME, PARK CONSTRUCTION VEHICLES, MATERIALS, OR EQUIPMENT INSIDE OF THE TREE PROTECTION ZONE (TPZ) OF TREES TO BE PROTECTED.
- D. SEE TREE PRESERVATION DETAILS AND SPECIFICATIONS FOR DISPOSITION AND CONDITIONAL TREATMENT OF TREES NOTED ON THE DRAWINGS.
- E. ALL NOTED TREES ON DRAWINGS MAY REQUIRE ADDITIONAL CONDITIONAL TREATMENT OTHER THAN NOTED ON THE PLANS. SEE TREE INVENTORY AND TREE PRESERVATION DETAILS (ALL TREE PRESERVATION WORK REQUIRED HEREIN IS INCIDENTAL TO OTHER UNLESS OTHERWISE NOTED).
- F. CONTRACTOR TO PROVIDE WATER, TREATMENT FOR BORERS AND OTHER INSECTICIDE TREATMENTS FOR TREES TO BE PRESERVED AS NEEDED PER ARBORIST'S RECOMMENDATION. (INCIDENTAL TO 01562 AND 02915 AND NOT PAID FOR SEPARATELY.)
- G. PROPOSED TREE SHALL BE PLANTED A MINIMUM OF 5'-0" FROM BACK OF CURB AND NO CLOSER THAN 20' O.C. FROM EACH OTHER. TREE MITIGATION PLACEMENT DISTANCES FROM MEDIAN TIP ENDS SHALL BE 50'-0" AT NON-SIGNALIZED INTERSECTIONS, AND 75'-0" AT SIGNALIZED INTERSECTIONS.
- H. ALL TREE MITIGATION MATERIALS AND LABOR REQUIRED TO PROVIDE AND INSTALL THE PROPOSED TREES SHALL BE INCIDENTAL TO 02915 - TREE PLANTING.
- I. CONTRACTOR TO SUBMIT MEANS AND METHODS OF WATERING PROCEDURES FOR NEWLY PLANTED TREES TO ARBORIST FOR REVIEW AND APPROVAL.
- J. CONTRACTOR TO WATER, PROVIDE WATER, AND MAINTENANCE FOR ALL NEWLY PLANTED TREES FOR A PERIOD OF TWO (2) YEARS FROM DATE OF SUBSTANTIAL COMPLETION TO SUSTAIN HEALTH OF TREE. (INCIDENTAL TO 02915 - TREE PLANTING AND NOT PAID FOR SEPARATELY.)
- K. CONTRACTOR TO EXERCISE CAUTION WHEN WORKING AROUND ALL EXISTING TREES REGARDLESS OF SPECIFIC MEASURES THAT ARE NOTED ON THESE PLANS AND DETAILS AT ALL TIMES AND TO THE EXTENT REQUIRED BY THE CONTRACT DOCUMENTS, SPECIFICALLY 01562.

GENERAL NOTES

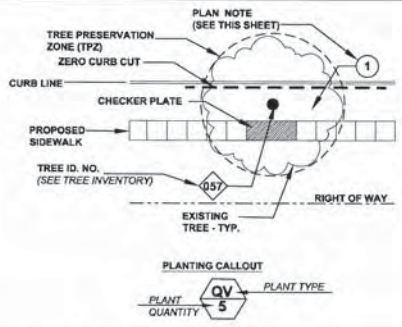
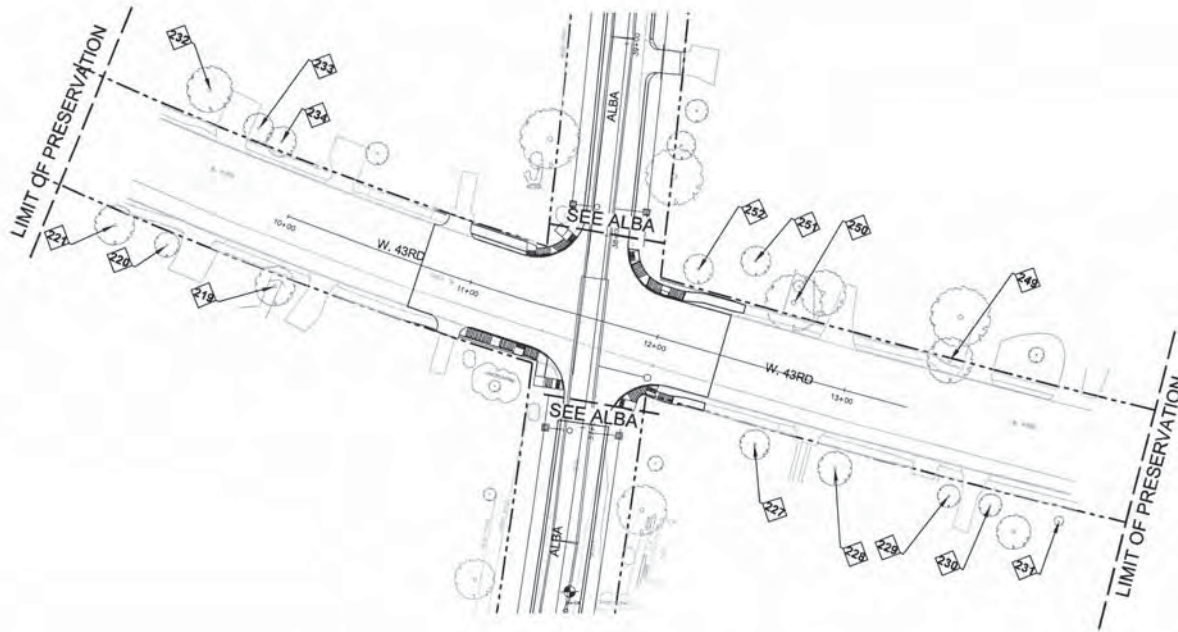
1. PROVIDE CHECKER PLATE OVER ROOT FLARE SEE DETAIL 1, SHEET 306.
2. PROVIDE ZERO CURB CUT CONTINUOUS SEE DETAIL 4, SHEET 305.
3. UNDEVELOPED PROPERTY - TREE REMOVAL AREA - NO MITIGATION REQUIRED. (INCIDENTAL TO CLEARING AND GRUBBING AND NOT PAID FOR SEPARATELY. SEE ENGINEERING PLANS FOR MORE INFORMATION.)
4. REMOVE SHRUB(S) AS NEEDED TO ACCOMMODATE PROPOSED IMPROVEMENTS (INCIDENTAL TO 01562)
5. REDUCE SIDEWALK WIDTH TO 4'-0" AND ADJUST PROPOSED SIDEWALK ("BUMP OUT") AT EXISTING TREE ROOT FLARE (INCIDENTAL AND NOT PAID FOR SEPARATELY)

PROPOSED PLANTING - CONTRACTOR SHALL MARK TREE LOCATIONS PRIOR TO PLANTING FOR APPROVAL BY CITY FORESTER AND CITY ENGINEER

TYPE	ABR.	BOTANICAL NAME	COMMON NAME	PLANTED SIZE
○	QV	QUERCUS VIRGINIANA	LIVE OAK	4" CAL. MIN.
○	UC	ULMUS CRASSIFOLIA	CEDAR ELM	4" CAL. MIN.
○	LI	LAGERSTROEMIA INDICA	CREPE MYRTLE	3" MULTI TRUNK
X		REMOVE TREE (INCIDENTAL TO 01562)		

*SEE PLANT LIST ON TREE PRESERVATION DETAILS FOR MORE INFORMATION

PLAN NOTES



PRESERVED TREE DIAGRAM

- GENERAL NOTES**
- CONTRACTOR SHALL SEEK PRIOR APPROVAL FROM THE ARBORIST, CITY URBAN FORESTER, AND CITY'S REPRESENTATIVE PRIOR TO INITIATION OF TREE REMOVAL AND/OR TREE PROTECTION ACTIVITIES WITHIN THE PROJECT SCOPE OF WORK. IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE CITY OF HOUSTON.
 - IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INSURE THAT NO DAMAGE TO EXISTING TREES TO BE PROTECTED AND/OR THOSE THAT HAVE THEIR TRUNKS OUTSIDE OF THE PROJECT LIMITS BUT HAVE SIGNIFICANT BRANCH OVERHANGING INTO THE PROJECT LIMITS.
 - THE CONTRACTOR SHALL NOT, AT ANY TIME, PARK CONSTRUCTION VEHICLES, MATERIALS, OR EQUIPMENT INSIDE OF THE TREE PROTECTION ZONE (TPZ) OF TREES TO BE PROTECTED.
 - SEE TREE PRESERVATION DETAILS AND SPECIFICATIONS FOR DISPOSITION AND CONDITIONAL TREATMENT OF TREES NOTED ON THE DRAWINGS.
 - ALL NOTED TREES ON DRAWINGS MAY REQUIRE ADDITIONAL CONDITIONAL TREATMENT OTHER THAN NOTED ON THE PLANS. SEE TREE INVENTORY AND TREE PRESERVATION DETAILS (ALL TREE PRESERVATION WORK REQUIRED HEREIN IS INCIDENTAL TO 01562 UNLESS OTHERWISE NOTED).
 - CONTRACTOR TO PROVIDE WATER, TREATMENT FOR BORERS AND OTHER INSECTICIDE TREATMENTS FOR TREES TO BE PRESERVED AS NEEDED PER ARBORIST'S RECOMMENDATION. (INCIDENTAL TO 01562 AND 02915 AND NOT PAID FOR SEPARATELY.)
 - PROPOSED TREE SHALL BE PLANTED A MINIMUM OF 5'-0" FROM BACK OF CURB AND NO CLOSER THAN 20' O.C. FROM EACH OTHER. TREE MITIGATION PLACEMENT DISTANCES FROM MEDIAN TIP ENDS SHALL BE 50'-0" AT NON-SIGNALIZED INTERSECTIONS AND 75'-0" AT SIGNALIZED INTERSECTIONS.
 - ALL TREE MITIGATION MATERIALS AND LABOR REQUIRED TO PROVIDE AND INSTALL THE PROPOSED TREES SHALL BE INCIDENTAL TO 02915 - TREE PLANTING.
 - CONTRACTOR TO SUBMIT MEANS AND METHODS OF WATERING PROCEDURES FOR NEWLY PLANTED TREES TO ARBORIST FOR REVIEW AND APPROVAL.
 - CONTRACTOR TO WARRANT, PROVIDE WATER, AND MAINTENANCE FOR ALL NEWLY PLANTED TREES FOR A PERIOD OF TWO (2) YEARS FROM DATE OF SUBSTANTIAL COMPLETION TO SUSTAIN HEALTH OF TREE. (INCIDENTAL TO 02915 TREE PLANTING AND NOT PAID FOR SEPARATELY.)
 - CONTRACTOR TO EXERCISE CAUTION WHEN WORKING AROUND ALL EXISTING TREES REGARDLESS OF SPECIFIC MEASURES THAT ARE NOTED ON THESE PLANS AND DETAILS AT ALL TIMES AND TO THE EXTENT REQUIRED BY THE CONTRACT DOCUMENTS, SPECIFICALLY 01562.

GENERAL NOTES

- PLAN NOTES**
- PROVIDE CHECKER PLATE OVER ROOT FLARE SEE DETAIL 1, SHEET 306.
 - PROVIDE ZERO CURB CUT CONTINUOUS SEE DETAIL 4, SHEET 305.
 - UNDEVELOPED PROPERTY - TREE REMOVAL AREA - NO MITIGATION REQUIRED. (INCIDENTAL TO CLEARING AND GRUBBING AND NOT PAID FOR SEPARATELY. SEE ENGINEERING PLANS FOR MORE INFORMATION.)
 - REMOVE SHRUB(S) AS NEED TO ACCOMMODATE PROPOSED IMPROVEMENTS (INCIDENTAL TO 01562)
 - REDUCE SIDEWALK WIDTH TO 4'-0" AND ADJUST PROPOSED SIDEWALK ("BUMP OUT") AT EXISTING TREE ROOT FLARE (INCIDENTAL AND NOT PAID FOR SEPARATELY)

PROPOSED PLANTING: CONTRACTOR SHALL MARK TREE LOCATIONS PRIOR TO PLANTING FOR APPROVAL BY CITY FORESTER AND CITY ENGINEER

TYPE	ABR.	BOTANICAL NAME	COMMON NAME	PLANTED SIZE
○	QV	QUERCUS VIRGINIANA	LIVE OAK	4" CAL. MIN.
○	UC	ULMUS CRASSIFOLIA	CEDAR ELM	4" CAL. MIN.
○	LI	LAGERSTROEMIA INDICA	CREPE MYRTLE	3" MULTI TRUNK
⊗			REMOVE TREE (INCIDENTAL TO 01562)	

*SEE PLANT LIST ON TREE PRESERVATION DETAILS FOR MORE INFORMATION



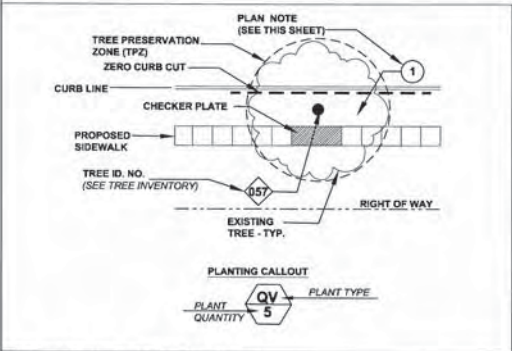
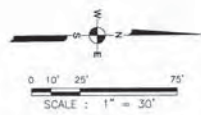
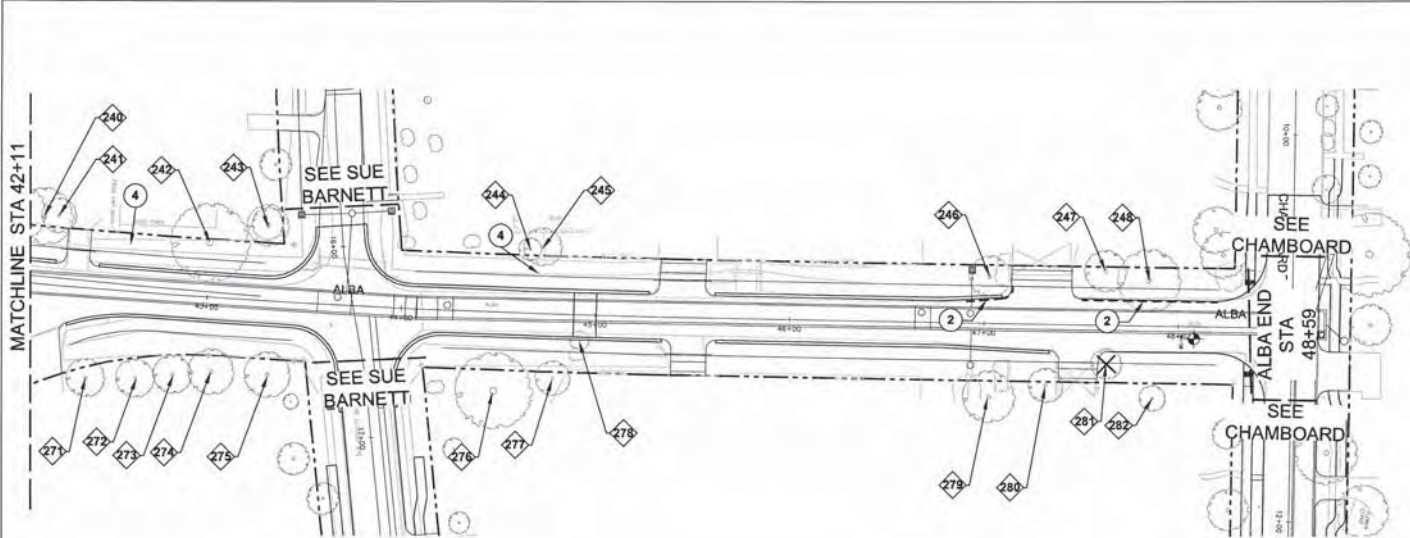
SURVEYED BY: LANDTECH
P.E. NO. 19-2000

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

TREE PRESERVATION PLANS
W. 43 RD ST.

WEB NUMBER	M-00285-001-4
DRAWING SCALE	SCALE: 1" = 30'-0"
CITY OF HOUSTON PM	JEFFREY H. HALL, P.E.
DATE	02/08/15
SHEET NO.	261 OF 385



PRESERVED TREE DIAGRAM

- GENERAL NOTES**
- CONTRACTOR SHALL SEEK PRIOR APPROVAL FROM THE ARBORIST, CITY URBAN FORESTOR, AND CITY'S REPRESENTATIVE PRIOR TO INITIATION OF TREE REMOVAL AND/OR TREE PROTECTION ACTIVITIES WITHIN THE PROJECT SCOPE OF WORK. IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE CITY OF HOUSTON.
 - IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INSURE THAT NO DAMAGE TO EXISTING TREES TO BE PROTECTED AND/OR THOSE THAT HAVE THEIR TRUNKS OUTSIDE OF THE PROJECT LIMITS BUT HAVE SIGNIFICANT BRANCH OVERHANG INTO THE PROJECT LIMITS.
 - THE CONTRACTOR SHALL NOT, AT ANY TIME, PARK CONSTRUCTION VEHICLES, MATERIALS, OR EQUIPMENT INSIDE OF THE TREE PROTECTION ZONE (TPZ) OF TREES TO BE PROTECTED.
 - SEE TREE PRESERVATION DETAILS AND SPECIFICATIONS FOR DISPOSITION AND CONDITIONAL TREATMENT OF TREES NOTED ON THE DRAWINGS.
 - ALL NOTED TREES ON DRAWINGS MAY REQUIRE ADDITIONAL CONDITIONAL TREATMENT OTHER THAN NOTED ON THE PLANS. SEE TREE INVENTORY AND TREE PRESERVATION DETAILS (ALL TREE PRESERVATION WORK REQUIRED HEREIN IS INCIDENTAL TO 01562 UNLESS OTHERWISE NOTED).
 - CONTRACTOR TO PROVIDE WATER, TREATMENT FOR BORERS AND OTHER INSECTICIDE TREATMENTS FOR TREES TO BE PRESERVED AS NEEDED PER ARBORIST'S RECOMMENDATION. (INCIDENTAL TO 01562 AND 02915 AND NOT PAID FOR SEPARATELY.)
 - PROPOSED TREE SHALL BE PLANTED A MINIMUM OF 5'-0" FROM BACK OF CURB AND NO CLOSER THAN 20' O.C. FROM EACH OTHER. TREE MITIGATION PLACEMENT DISTANCES FROM MEDIAN TIP ENDS SHALL BE 50'-0" AT NON-SIGNALIZED INTERSECTIONS, AND 75'-0" AT SIGNALIZED INTERSECTIONS.
 - ALL TREE MITIGATION MATERIALS AND LABOR REQUIRED TO PROVIDE AND INSTALL THE PROPOSED TREES SHALL BE INCIDENTAL TO 02915 - TREE PLANTING.
 - CONTRACTOR TO SUBMIT MEANS AND METHODS OF WATERING PROCEDURES FOR NEWLY PLANTED TREES TO ARBORIST FOR REVIEW AND APPROVAL.
 - CONTRACTOR TO WARRANT, PROVIDE WATER, AND MAINTENANCE FOR ALL NEWLY PLANTED TREES FOR A PERIOD OF TWO (2) YEARS FROM DATE OF SUBSTANTIAL COMPLETION TO SUSTAIN HEALTH OF TREE. (INCIDENTAL TO 02915 - TREE PLANTING AND NOT PAID FOR SEPARATELY.)
 - CONTRACTOR TO EXERCISE CAUTION WHEN WORKING AROUND ALL EXISTING TREES REGARDLESS OF SPECIFIC MEASURES THAT ARE NOTED ON THESE PLANS AND DETAILS AT ALL TIMES AND TO THE EXTENT REQUIRED BY THE CONTRACT DOCUMENTS, SPECIFICALLY 01562.

- PLAN NOTES**
- PROVIDE CHECKER PLATE OVER ROOT FLARE SEE DETAIL 1, SHEET 306.
 - PROVIDE ZERO CURB CUT CONTINUOUS SEE DETAIL 4, SHEET 305.
 - UNDEVELOPED PROPERTY - TREE REMOVAL AREA - NO MITIGATION REQUIRED. (INCIDENTAL TO CLEARING AND GRUBBING AND NOT PAID FOR SEPARATELY. SEE ENGINEERING PLANS FOR MORE INFORMATION.)
 - REMOVE SHRUB(S) AS NEED TO ACCOMMODATE PROPOSED IMPROVEMENTS (INCIDENTAL TO 01562)
 - REDUCE SIDEWALK WIDTH TO 4'-0" AND ADJUST PROPOSED SIDEWALK ("BUMP OUT") AT EXISTING TREE ROOT FLARE (INCIDENTAL AND NOT PAID FOR SEPARATELY)
- PROPOSED PLANTING: CONTRACTOR SHALL MARK TREE LOCATIONS PRIOR TO PLANTING FOR APPROVAL BY CITY FORESTER AND CITY ENGINEER**
- | TYPE | ABR. | BOTANICAL NAME | COMMON NAME | PLANTED SIZE |
|------|------|----------------------|-----------------------------------|----------------|
| ● | QV | QUERCUS VIRGINIANA | LIVE OAK | 4" CAL. MIN. |
| ○ | UC | ULMUS CRASSIFOLIA | CEDAR ELM | 4" CAL. MIN. |
| ⊗ | LI | LAGERSTROEMIA INDICA | CREPE MYRTLE | 3" MULTI TRUNK |
| × | | | REMOVE TREE (INCIDENTAL TO 01562) | |
- *SEE PLANT LIST ON TREE PRESERVATION DETAILS FOR MORE INFORMATION

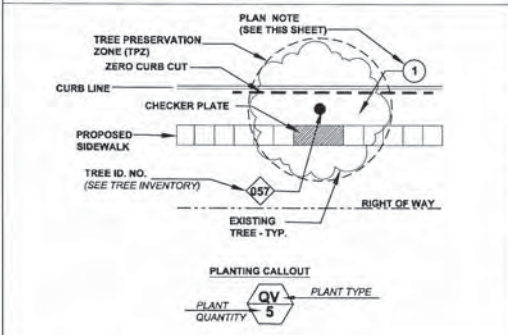
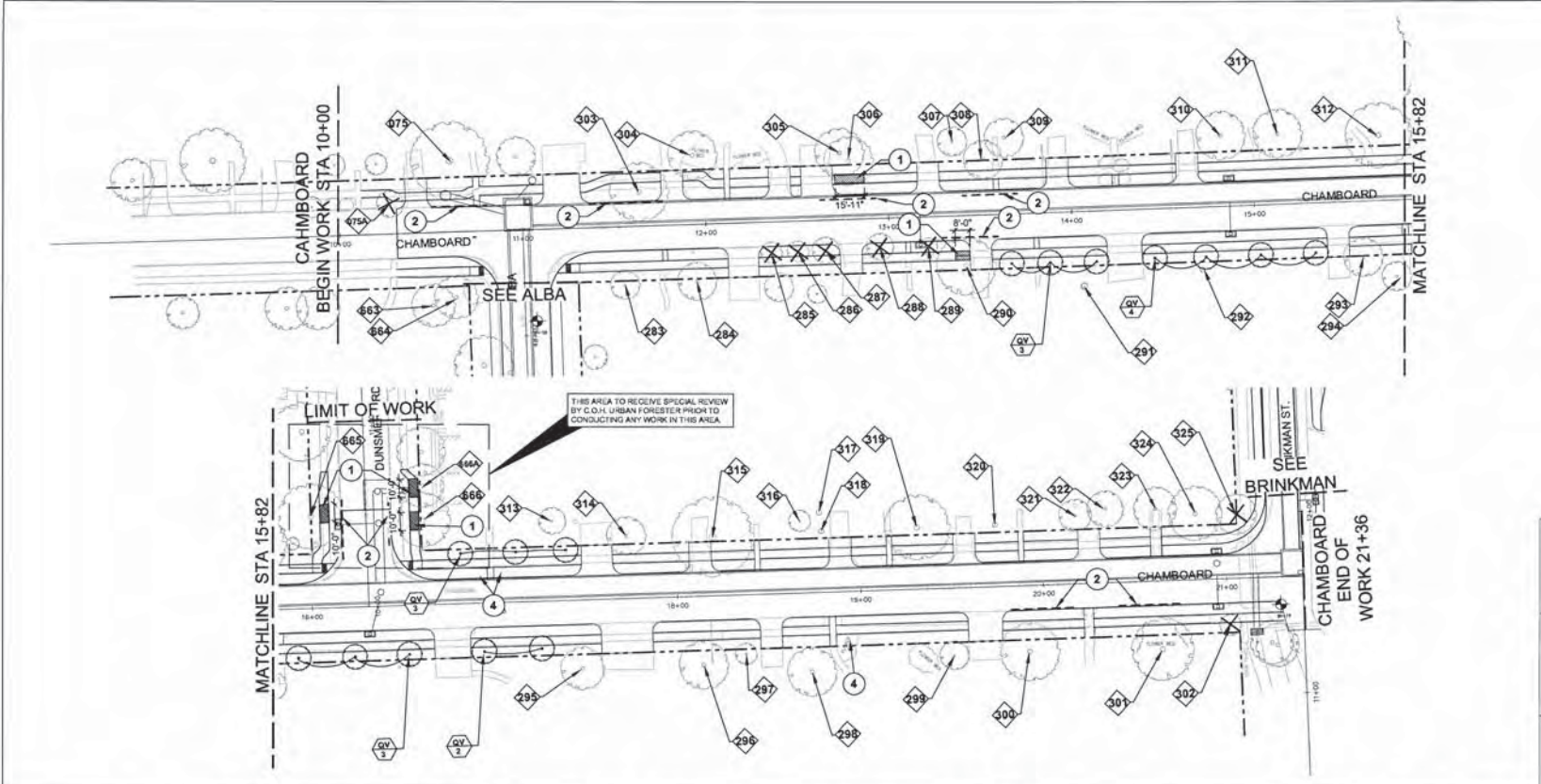
PLAN NOTES



CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

ALBA ST. TREE PRESERVATION PLANS
 STA: 42+11 TO 48+59

WBS NUMBER	M-000285-0001-4
DRAWING SCALE	SCALE: 1" = 30'-0"
CITY OF HOUSTON P.M.	55634
DATE	02/06/15
SHEET NO.	282 OF 385



PRESERVED TREE DIAGRAM

- GENERAL NOTES**
- CONTRACTOR SHALL SEEK PRIOR APPROVAL FROM THE ARBORIST, CITY URBAN FORESTER, AND CITY REPRESENTATIVE PRIOR TO INITIATION OF TREE REMOVAL AND/OR TREE PROTECTION ACTIVITIES WITHIN THE PROJECT SCOPE OF WORK. IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE CITY OF HOUSTON.
 - IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INSURE THAT NO DAMAGE TO EXISTING TREES TO BE PROTECTED AND/OR THOSE THAT HAVE THEIR TRUNKS OUTSIDE OF THE PROJECT LIMITS BUT HAVE SIGNIFICANT BRANCH OVERHANG INTO THE PROJECT LIMITS.
 - THE CONTRACTOR SHALL NOT, AT ANY TIME, PARK CONSTRUCTION VEHICLES, MATERIALS, OR EQUIPMENT INSIDE OF THE TREE PROTECTION ZONE (TPZ) OF TREES TO BE PROTECTED.
 - SEE TREE PRESERVATION DETAILS AND SPECIFICATIONS FOR DISPOSITION AND CONDITIONAL TREATMENT OF TREES NOTED ON THE DRAWINGS.
 - ALL NOTED TREES ON DRAWINGS MAY REQUIRE ADDITIONAL CONDITIONAL TREATMENT OTHER THAN NOTED ON THE PLANS. SEE TREE INVENTORY AND TREE PRESERVATION DETAILS (ALL TREE PRESERVATION WORK REQUIRED HEREIN IS INCIDENTAL TO 01562 UNLESS OTHERWISE NOTED).
 - CONTRACTOR TO PROVIDE WATER, TREATMENT FOR BORERS AND OTHER INSECTICIDE TREATMENTS FOR TREES TO BE PRESERVED AS NEEDED PER ARBORIST'S RECOMMENDATION. (INCIDENTAL TO 01562 AND 02915 AND NOT PAID FOR SEPARATELY.)
 - PROPOSED TREES SHALL BE PLANTED A MINIMUM OF 5'-0" FROM BACK OF CURB AND NO CLOSER THAN 20' O.C. FROM EACH OTHER. TREE MITIGATION PLACEMENT DISTANCES FROM MEDIAN TIP ENDS SHALL BE 50'-0" AT NON-SIGNALIZED INTERSECTIONS, AND 75'-0" AT SIGNALIZED INTERSECTIONS.
 - ALL TREE MITIGATION MATERIALS AND LABOR REQUIRED TO PROVIDE AND INSTALL THE PROPOSED TREES SHALL BE INCIDENTAL TO 02915. TREE PLANTING.
 - CONTRACTOR TO SUBMIT MEANS AND METHODS OF WATERING PROCEDURES FOR NEWLY PLANTED TREES TO ARBORIST FOR REVIEW AND APPROVAL.
 - CONTRACTOR TO WARRANT, PROVIDE WATER, AND MAINTENANCE FOR ALL NEWLY PLANTED TREES FOR A PERIOD OF TWO (2) YEARS FROM DATE OF SUBSTANTIAL COMPLETION TO SUSTAIN HEALTH OF TREE. (INCIDENTAL TO 02915 - TREE PLANTING AND NOT PAID FOR SEPARATELY.)
 - CONTRACTOR TO EXERCISE CAUTION WHEN WORKING AROUND ALL EXISTING TREES REGARDLESS OF SPECIFIC MEASURES THAT ARE NOTED ON THESE PLANS AND DETAILS AT ALL TIMES AND TO THE EXTENT REQUIRED BY THE CONTRACT DOCUMENTS, SPECIFICALLY 01562.

GENERAL NOTES

- PLAN NOTES**
- PROVIDE CHECKER PLATE OVER ROOT FLARE SEE DETAIL 1, SHEET 306.
 - PROVIDE ZERO CURB CUT CONTINUOUS SEE DETAIL 4, SHEET 305.
 - UNDEVELOPED PROPERTY - TREE REMOVAL AREA - NO MITIGATION REQUIRED. (INCIDENTAL TO CLEARING AND GRUBBING AND NOT PAID FOR SEPARATELY. SEE ENGINEERING PLANS FOR MORE INFORMATION.)
 - REMOVE SHRUB(S) AS NEEDED TO ACCOMMODATE PROPOSED IMPROVEMENTS (INCIDENTAL TO 01562)
 - REDUCE SIDEWALK WIDTH TO 4'-0" AND ADJUST PROPOSED SIDEWALK ("BUMP OUT") AT EXISTING TREE ROOT FLARE (INCIDENTAL AND NOT PAID FOR SEPARATELY)
- PROPOSED PLANTING: CONTRACTOR SHALL MARK TREE LOCATIONS PRIOR TO PLANTING FOR APPROVAL BY CITY FORESTER AND CITY ENGINEER
- | TYPE | ABR. | BOTANICAL NAME | COMMON NAME | PLANTED SIZE |
|------|------|----------------------|-----------------------------------|----------------|
| QV | QV | QUERCUS VIRGINIANA | LIVE OAK | 4" CAL. MIN. |
| UC | UC | ULMUS CRASSIFOLIA | CEDAR ELM | 4" CAL. MIN. |
| LI | LI | LAGERSTROEMIA INDICA | CREPE MYRTLE | 3" MULTI TRUNK |
| X | | | REMOVE TREE (INCIDENTAL TO 01562) | |
- *SEE PLANT LIST ON TREE PRESERVATION DETAILS FOR MORE INFORMATION

PLAN NOTES

1000 WEA
3333 BRUNNEN, SUITE 200
HOUSTON, TEXAS 77057
Phone: (713) 825-1044
Fax: (713) 866-6333

Associates Inc.
1001 WEST 45TH ST
HOUSTON, TEXAS 77056
P. O. BOX 980111 • DALLAS, TEXAS 75298-0111
• 214-343-7200
• 214-343-7201

CERTIFIED ARBORIST,
STATE OF TEXAS
Michael J. ...
04/01/2016

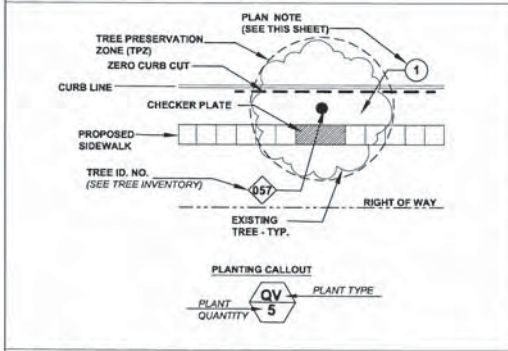
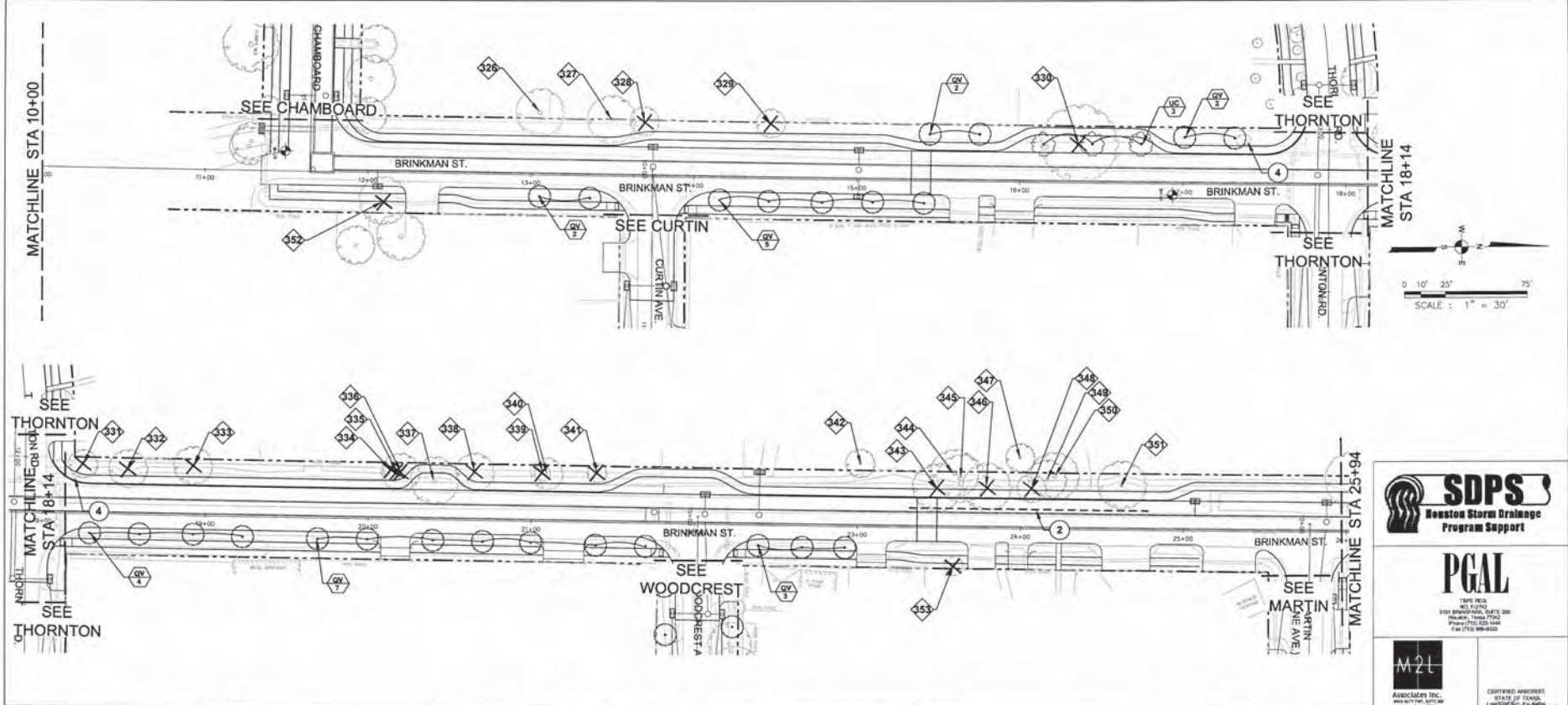
APPROVED BY: LAMITCH
PR. NO.: 16-0004

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING CHAMBOARD TREE PRESERVATION PLANS
STA: 10+00 TO 21+36
DUNSMERE RD.

WBS NUMBER	16-0004
DRAWING SCALE	SCALE: 1" = 30'-0"
CITY OF HOUSTON PM	JEFFREY T. HALL, P.E.
DATE	02/29/16
SHEET NO.	283 OF 365

563 U



GENERAL NOTES

- A. CONTRACTOR SHALL SEEK PRIOR APPROVAL FROM THE ARBORIST, CITY URBAN FORESTER, AND CITY'S REPRESENTATIVE PRIOR TO INITIATION OF TREE REMOVAL AND/OR TREE PROTECTION ACTIVITIES WITHIN THE PROJECT SCOPE OF WORK. IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE CITY OF HOUSTON.
- B. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INSURE THAT NO DAMAGE TO EXISTING TREES TO BE PROTECTED AND/OR THOSE THAT HAVE THEIR TRUNKS OUTSIDE OF THE PROJECT LIMITS BUT HAVE SIGNIFICANT BRANCH OVERHANG INTO THE PROJECT LIMITS.
- C. THE CONTRACTOR SHALL NOT, AT ANY TIME, PARK CONSTRUCTION VEHICLES, MATERIALS, OR EQUIPMENT INSIDE OF THE TREE PROTECTION ZONE (TPZ) OF TREES TO BE PROTECTED.
- D. SEE TREE PRESERVATION DETAILS AND SPECIFICATIONS FOR DISPOSITION AND CONDITIONAL TREATMENT OF TREES NOTED ON THE DRAWINGS.
- E. ALL NOTED TREES ON DRAWINGS MAY REQUIRE ADDITIONAL CONDITIONAL TREATMENT OTHER THAN NOTED ON THE PLANS. SEE TREE INVENTORY AND TREE PRESERVATION DETAILS (ALL TREE PRESERVATION WORK REQUIRED HEREIN IS INCIDENTAL TO 01560 UNLESS OTHERWISE NOTED).
- F. CONTRACTOR TO PROVIDE WATER, TREATMENT FOR BORERS AND OTHER INSECTICIDE TREATMENTS FOR TREES TO BE PRESERVED AS NEEDED PER ARBORIST'S RECOMMENDATION. (INCIDENTAL TO 01560 AND 02915 AND NOT PAID FOR SEPARATELY.)
- G. PROPOSED TREE SHALL BE PLANTED A MINIMUM OF 5'-0" FROM BACK OF CURB AND NO CLOSER THAN 20' O.C. FROM EACH OTHER. TREE MITIGATION PLACEMENT DISTANCES FROM MEDIAN TIP ENDS SHALL BE 50'-0" AT NON-SIGNALIZED INTERSECTIONS, AND 75'-0" AT SIGNALIZED INTERSECTIONS.
- H. ALL TREE MITIGATION MATERIALS AND LABOR REQUIRED TO PROVIDE AND INSTALL THE PROPOSED TREES SHALL BE INCIDENTAL TO 02915 - TREE PLANTING.
- I. CONTRACTOR TO SUBMIT MEANS AND METHODS OF WATERING PROCEDURES FOR NEWLY PLANTED TREES TO ARBORIST FOR REVIEW AND APPROVAL.
- J. CONTRACTOR TO WARRANT, PROVIDE WATER, AND MAINTENANCE FOR ALL NEWLY PLANTED TREES FOR A PERIOD OF TWO (2) YEARS FROM DATE OF SUBSTANTIAL COMPLETION TO SUSTAIN HEALTH OF TREE. (INCIDENTAL TO 02915 - TREE PLANTING AND NOT PAID FOR SEPARATELY.)
- K. CONTRACTOR TO EXERCISE CAUTION WHEN WORKING AROUND ALL EXISTING TREES REGARDLESS OF SPECIFIC MEASURES THAT ARE NOTED ON THESE PLANS AND DETAILS AT ALL TIMES AND TO THE EXTENT REQUIRED BY THE CONTRACT DOCUMENTS, SPECIFICALLY 01562.

PLAN NOTES

1. PROVIDE CHECKER PLATE OVER ROOT FLARE SEE DETAIL 1, SHEET 306.
2. PROVIDE ZERO CURB CUT CONTINUOUS SEE DETAIL 4, SHEET 305.
3. UNDEVELOPED PROPERTY - TREE REMOVAL AREA - NO MITIGATION REQUIRED. (INCIDENTAL TO CLEARING AND GRUBBING AND NOT PAID FOR SEPARATELY. SEE ENGINEERING PLANS FOR MORE INFORMATION.)
4. REMOVE SHRUB(S) AS NEED TO ACCOMMODATE PROPOSED IMPROVEMENTS (INCIDENTAL TO 01562)
5. REDUCE SIDEWALK WIDTH TO 4'-0" AND ADJUST PROPOSED SIDEWALK ("BUMP OUT") AT EXISTING TREE ROOT FLARE (INCIDENTAL AND NOT PAID FOR SEPARATELY)

PROPOSED PLANTING: CONTRACTOR SHALL MARK TREE LOCATIONS PRIOR TO PLANTING FOR APPROVAL BY CITY FORESTER AND CITY ENGINEER

TYPE	ABR.	BOTANICAL NAME	COMMON NAME	PLANTED SIZE
•	QV	QUERCUS VIRGINIANA	LIVE OAK	4" CAL. MIN.
•	UC	ULMUS CRASSIFOLIA	CEDAR ELM	4" CAL. MIN.
•	LI	LAGERSTROEMIA INDICA	CREPE MYRTLE	3" MULTI TRUNK
X			REMOVE TREE (INCIDENTAL TO 01562)	

*SEE PLANT LIST ON TREE PRESERVATION DETAILS FOR MORE INFORMATION

SDPS
Houston Storm Drainage Program Support

PGAL
1301 BRINKMAN, SUITE 100
HOUSTON, TEXAS 77022
Phone: (713) 552-1444
Fax: (713) 556-0222

M2L
Associates Inc.
11000 Katy Road, Suite 100
Houston, Texas 77058
Phone: (713) 552-1444
Fax: (713) 556-0222

DESIGNED BY: LANCEYCH
FIELD: P.0004

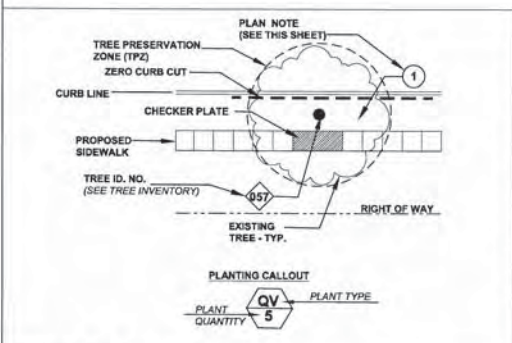
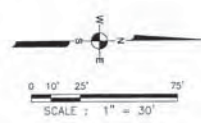
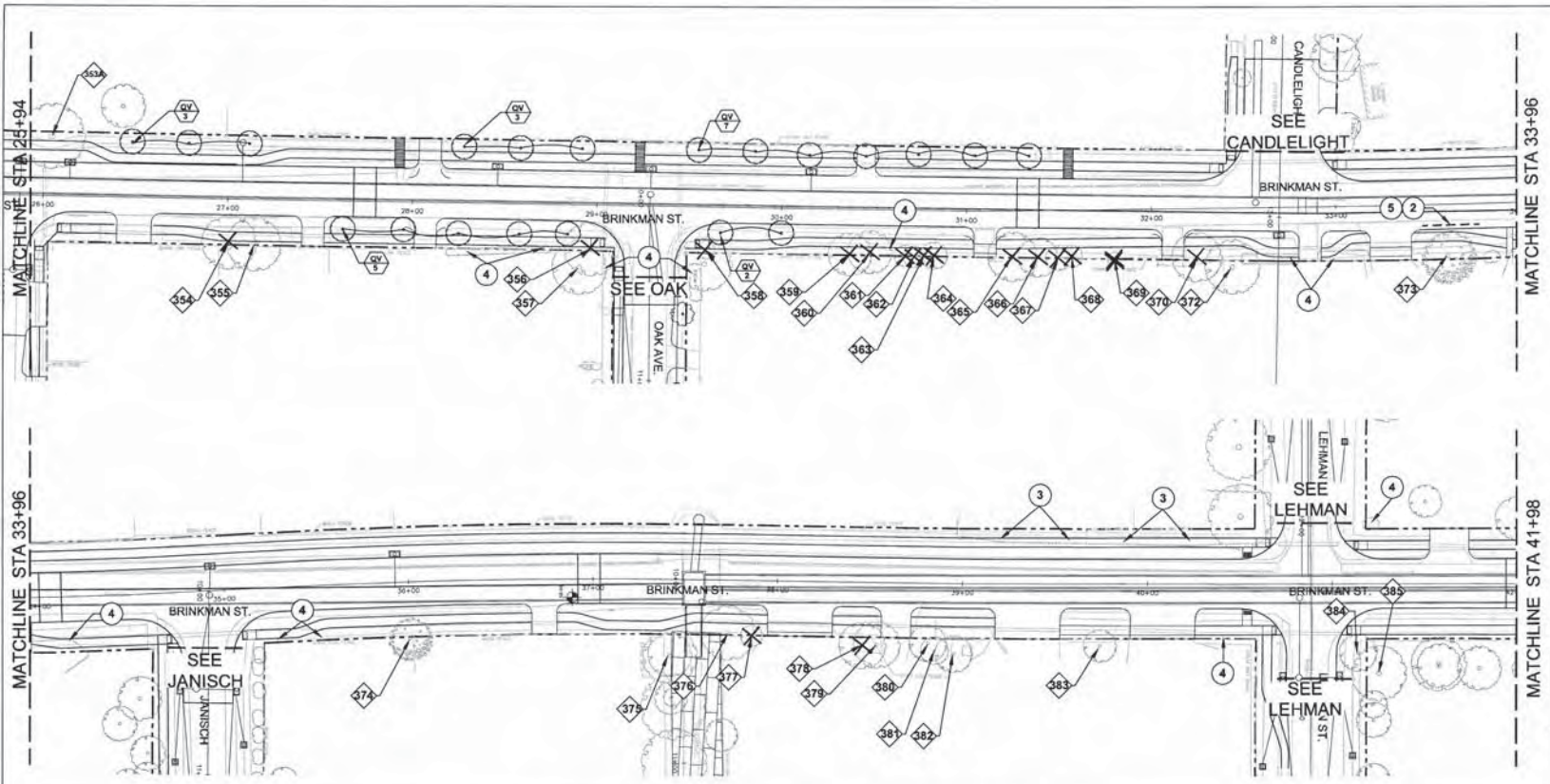
CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

BRINKMAN ST. TREE PRESERVATION PLANS
STA: 10+00 TO 25+94

WBS NUMBER
M-000285-0001-4
DRAWING SCALE
SCALE: 1" = 30'-0"
CITY OF HOUSTON/PWM
JEFFREY T. HALL, P.E.
DATE: 02/26/15 SHEET NO: 284 OF 385

55630



PRESERVED TREE DIAGRAM

- GENERAL NOTES**
- CONTRACTOR SHALL SEEK PRIOR APPROVAL FROM THE ARBORIST, CITY URBAN FORESTOR, AND CITY'S REPRESENTATIVE PRIOR TO INITIATION OF TREE REMOVAL AND/OR TREE PROTECTION ACTIVITIES WITHIN THE PROJECT SCOPE OF WORK. IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE CITY OF HOUSTON.
 - IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INSURE THAT NO DAMAGE TO EXISTING TREES TO BE PROTECTED AND/OR THOSE THAT HAVE THEIR TRUNKS OUTSIDE OF THE PROJECT LIMITS BUT HAVE SIGNIFICANT BRANCH OVERHANG INTO THE PROJECT LIMITS.
 - THE CONTRACTOR SHALL NOT, AT ANY TIME, PARK CONSTRUCTION VEHICLES, MATERIALS, OR EQUIPMENT INSIDE OF THE TREE PROTECTION ZONE (TPZ) OF TREES TO BE PROTECTED.
 - SEE TREE PRESERVATION DETAILS AND SPECIFICATIONS FOR DISPOSITION AND CONDITIONAL TREATMENT OF TREES NOTED ON THE DRAWINGS.
 - ALL NOTED TREES ON DRAWINGS MAY REQUIRE ADDITIONAL CONDITIONAL TREATMENT OTHER THAN NOTED ON THE PLANS. SEE TREE INVENTORY AND TREE PRESERVATION DETAILS (ALL TREE PRESERVATION WORK REQUIRED HEREIN IS INCIDENTAL TO 01562 UNLESS OTHERWISE NOTED).
 - CONTRACTOR TO PROVIDE WATER, TREATMENT FOR BORERS AND OTHER INSECTICIDE TREATMENTS FOR TREES TO BE PRESERVED AS NEEDED PER ARBORIST'S RECOMMENDATION. (INCIDENTAL TO 01562 AND 02915 AND NOT PAID FOR SEPARATELY.)
 - PROPOSED TREE SHALL BE PLANTED A MINIMUM OF 5'-0" FROM BACK OF CURB AND NO CLOSER THAN 20" O.C. FROM EACH OTHER. TREE MITIGATION PLACEMENT DISTANCES FROM MEDIAN TIP ENDS SHALL BE 50'-0" AT NON-SIGNALIZED INTERSECTIONS, AND 75'-0" AT SIGNALIZED INTERSECTIONS.
 - ALL TREE MITIGATION MATERIALS AND LABOR REQUIRED TO PROVIDE AND INSTALL THE PROPOSED TREES SHALL BE INCIDENTAL TO 02915 - TREE PLANTING.
 - CONTRACTOR TO SUBMIT MEANS AND METHODS OF WATERING PROCEDURES FOR NEWLY PLANTED TREES TO ARBORIST FOR REVIEW AND APPROVAL.
 - CONTRACTOR TO WARRANT, PROVIDE WATER, AND MAINTENANCE FOR ALL NEWLY PLANTED TREES FOR A PERIOD OF TWO (2) YEARS FROM DATE OF SUBSTANTIAL COMPLETION TO SUSTAIN HEALTH OF TREE. (INCIDENTAL TO 02915 - TREE PLANTING AND NOT PAID FOR SEPARATELY.)
 - CONTRACTOR TO EXERCISE CAUTION WHEN WORKING AROUND ALL EXISTING TREES REGARDLESS OF SPECIFIC MEASURES THAT ARE NOTED ON THESE PLANS AND DETAILS AT ALL TIMES AND TO THE EXTENT REQUIRED BY THE CONTRACT DOCUMENTS, SPECIFICALLY 01562.

GENERAL NOTES

- PROVIDE CHECKER PLATE OVER ROOT FLARE SEE DETAIL 1, SHEET 306.
- PROVIDE ZERO CURB CUT CONTINUOUS SEE DETAIL 4, SHEET 305.
- UNDEVELOPED PROPERTY - TREE REMOVAL AREA - NO MITIGATION REQUIRED. (INCIDENTAL TO CLEARING AND GRUBBING AND NOT PAID FOR SEPARATELY. SEE ENGINEERING PLANS FOR MORE INFORMATION.)
- REMOVE SHRUB(S) AS NEEDED TO ACCOMMODATE PROPOSED IMPROVEMENTS (INCIDENTAL TO 01562)
- REDUCE SIDEWALK WIDTH TO 4'-0" AND ADJUST PROPOSED SIDEWALK ("BUMP OUT") AT EXISTING TREE ROOT FLARE (INCIDENTAL AND NOT PAID FOR SEPARATELY)

PROPOSED PLANTING: CONTRACTOR SHALL MARK TREE LOCATIONS PRIOR TO PLANTING FOR APPROVAL BY CITY FORESTER AND CITY ENGINEER

TYPE	ABR.	BOTANICAL NAME	COMMON NAME	PLANTED SIZE
QV		QUERCUS VIRGINIANA	LIVE OAK	4" CAL. MIN.
UC		ULMUS CRASSIFOLIA	CEDAR ELM	4" CAL. MIN.
LJ		LAGERSTROEMIA INDICA	CREPE MYRTLE	3" MULTI TRUNK
X		REMOVE TREE (INCIDENTAL TO 01562)		

*SEE PLANT LIST ON TREE PRESERVATION DETAILS FOR MORE INFORMATION

PLAN NOTES



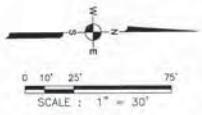
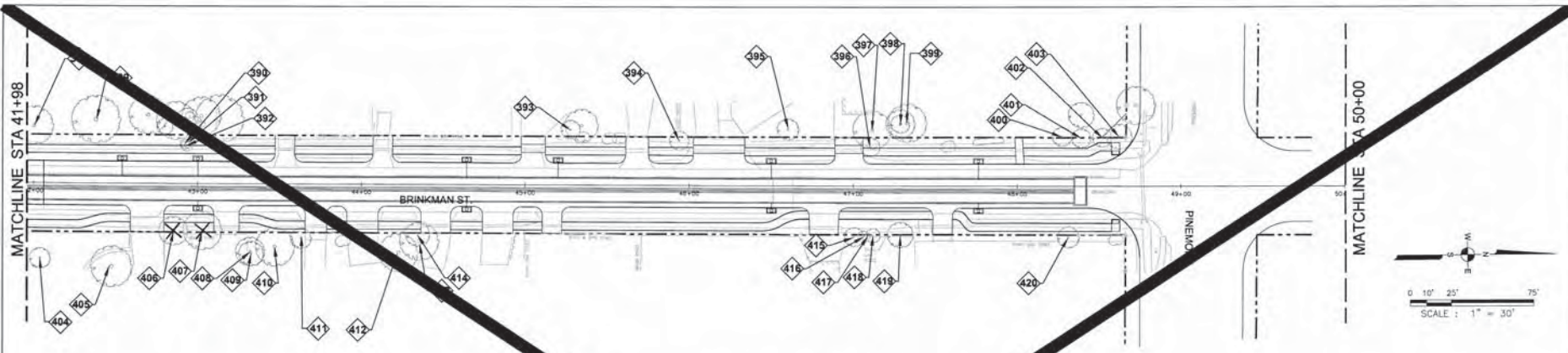
CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

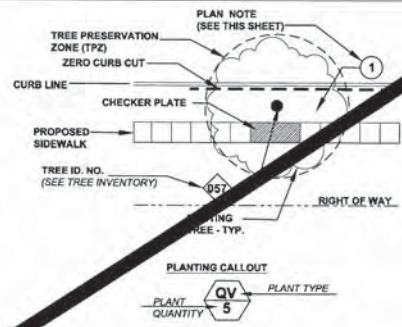
BRINKMAN ST. TREE PRESERVATION PLANS STA: 25+94 TO 41+98

WBS NUMBER	M-000285-0001-4
DRAWING SCALE	SCALE: 1" = 30'-0"
DATE	02/28/15
SHEET NO.	265 OF 385

55630



OMIT



RESERVED TREE DIAGRAM

- CONTRACTOR SHALL SEEK PRIOR APPROVAL FROM THE ARBORIST, CITY URBAN FORESTOR, AND CITY'S REPRESENTATIVE PRIOR TO INITIATION OF TREE REMOVAL AND/OR TREE PROTECTION ACTIVITIES WITHIN THE PROJECT SCOPE OF WORK. IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE CITY OF HOUSTON.
- B. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INSURE THAT NO DAMAGE TO EXISTING TREES TO BE PROTECTED AND/OR THOSE THAT HAVE THEIR TRUNKS OUTSIDE OF THE PROJECT LIMITS BUT HAVE SIGNIFICANT BRANCH OVERHANG INTO THE PROJECT LIMITS.
 - C. THE CONTRACTOR SHALL NOT, AT ANY TIME, PARK CONSTRUCTION VEHICLES, MATERIALS, OR EQUIPMENT INSIDE OF THE TREE PROTECTION ZONE (TPZ) OF TREES TO BE PROTECTED.
 - D. SEE TREE PRESERVATION DETAILS AND SPECIFICATIONS FOR DISPOSITION AND CONDITIONAL TREATMENT OF TREES NOTED ON THE DRAWINGS.
 - E. ALL NOTED TREES ON DRAWINGS MAY REQUIRE ADDITIONAL CONDITIONAL TREATMENT OTHER THAN NOTED ON THE PLANS. SEE TREE INVENTORY AND TREE PRESERVATION DETAILS (ALL TREE PRESERVATION WORK REQUIRED HEREIN IS INCIDENTAL TO 01562 UNLESS OTHERWISE NOTED).
 - F. CONTRACTOR TO PROVIDE WATER, TREATMENT FOR BORERS AND OTHER INSECTICIDE TREATMENTS FOR TREES TO BE PRESERVED AS NEEDED PER ARBORIST'S RECOMMENDATION. (INCIDENTAL TO 01562 AND 02915 AND NOT PAID FOR SEPARATELY.)
 - G. PROPOSED TREE SHALL BE PLANTED A MINIMUM OF 5'-0" FROM BACK OF CURB AND NO CLOSER THAN 30' O.C. FROM EACH OTHER. TREE MITIGATION PLACEMENT DISTANCES FROM MEDIAN TIP ENDS SHALL BE 50'-0" AT NON-SIGNALIZED INTERSECTIONS, AND 75'-0" AT SIGNALIZED INTERSECTIONS.
 - H. ALL TREE MITIGATION MATERIALS AND LABOR REQUIRED TO PROVIDE AND INSTALL THE PROPOSED TREES SHALL BE INCIDENTAL TO 02915 - TREE PLANTING.
 - I. CONTRACTOR TO SUBMIT MEANS AND METHODS OF WATERING PROCEDURES FOR NEWLY PLANTED TREES TO ARBORIST FOR REVIEW AND APPROVAL.
 - J. CONTRACTOR TO WARRANT, PROVIDE WATER, AND MAINTENANCE FOR ALL NEWLY PLANTED TREES FOR A PERIOD OF TWO (2) YEARS FROM DATE OF SUBSTANTIAL COMPLETION TO SUSTAIN HEALTH OF TREE. (INCIDENTAL TO 02915-TREE PLANTING AND NOT PAID FOR SEPARATELY.)
 - K. CONTRACTOR TO EXERCISE CAUTION WHEN WORKING AROUND ALL EXISTING TREES REGARDLESS OF SPECIFIC MEASURES THAT ARE NOTED ON THESE PLANS AND DETAILS AT ALL TIMES AND TO THE EXTENT REQUIRED BY THE CONTRACT DOCUMENTS, SPECIFICALLY 01562.

GENERAL NOTES

- ① PROVIDE CHECKER PLATE OVER TREE FLARE SEE DETAIL 1, SHEET 306.
- ② PROVIDE ZERO CURB CUT CONTINUOUS SEE DETAIL 4, SHEET 305.
- ③ UNDEVELOPED PROPERTY - TREE REMOVAL AREA - NO MITIGATION REQUIRED. (INCIDENTAL TO CLEARING AND GRUBBING AND NOT PAID FOR SEPARATELY. SEE ENGINEERING PLANS FOR MORE INFORMATION.)
- ④ REMOVE SHRUB(S) AS NEED TO ACCOMMODATE PROPOSED IMPROVEMENTS (INCIDENTAL TO 01562)
- ⑤ REDUCE SIDEWALK WIDTH TO 4'-0" AND ADJUST PROPOSED SIDEWALK ("BUMP OUT") AT EXISTING TREE ROOT FLARE (INCIDENTAL AND NOT PAID FOR SEPARATELY)

PROPOSED PLANTING: CONTRACTOR SHALL MARK TREE LOCATIONS PRIOR TO PLANTING FOR APPROVAL BY CITY FORESTER AND CITY ENGINEER

TYPE	ABR.	BOTANICAL NAME	COMMON NAME	PLANTED SIZE
○	QV	QUERCUS VIRGINIANA	LIVE OAK	4" CAL. MIN.
○	UC	ULMUS CRASSIFOLIA	CEDAR ELM	4" CAL. MIN.
○	LJ	LAGERSTROMIA INDICA	CREPE MYRTLE	3" MULTI TRUNK
✕			REMOVE TREE (INCIDENTAL TO 01562)	

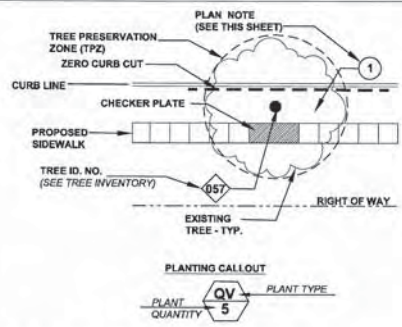
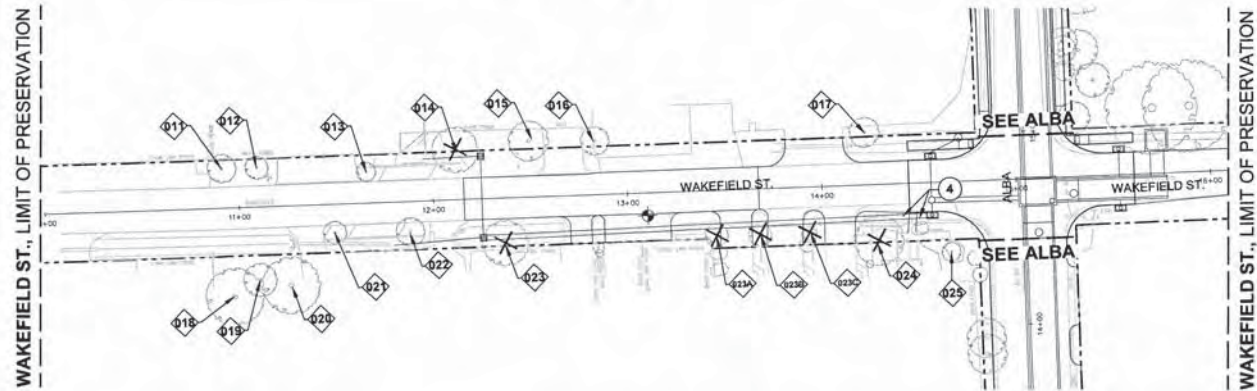
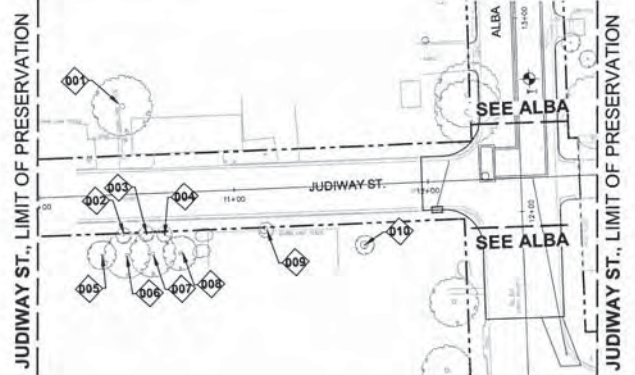
*SEE PLANT LIST ON TREE PRESERVATION DETAILS FOR MORE INFORMATION

PLAN NOTES



CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING BRINKMAN ST. TREE PRESERVATION PLANS STA: 41+98 TO 50+00

NUMBER: 55630
DRAWING NO.:
SCALE: 1" = 30'
CITY OF HOUSTON PM
DATE: 02/28/15
SHEET NO.: 286 OF 365



PRESERVED TREE DIAGRAM

- PLAN NOTE (SEE THIS SHEET)**
- CONTRACTOR SHALL SEEK PRIOR APPROVAL FROM THE ARBORIST, CITY URBAN FORESTOR, AND CITY'S REPRESENTATIVE PRIOR TO INITIATION OF TREE REMOVAL AND/OR TREE PROTECTION ACTIVITIES WITHIN THE PROJECT SCOPE OF WORK. IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE CITY OF HOUSTON AND/OR THOSE THAT HAVE THEIR TRUNKS OUTSIDE OF THE PROJECT LIMITS BUT HAVE SIGNIFICANT BRANCH OVERHANGS INTO THE PROJECT LIMITS.
 - IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INSURE THAT NO DAMAGE TO EXISTING TREES TO BE PROTECTED AND/OR THOSE THAT HAVE THEIR TRUNKS OUTSIDE OF THE PROJECT LIMITS BUT HAVE SIGNIFICANT BRANCH OVERHANGS INTO THE PROJECT LIMITS.
 - THE CONTRACTOR SHALL NOT, AT ANY TIME, PARK CONSTRUCTION VEHICLES, MATERIALS, OR EQUIPMENT INSIDE OF THE TREE PROTECTION ZONE (TPZ) OF TREES TO BE PROTECTED.
 - SEE TREE PRESERVATION DETAILS AND SPECIFICATIONS FOR DISPOSITION AND CONDITIONAL TREATMENT OF TREES NOTED ON THE DRAWINGS.
 - ALL NOTED TREES ON DRAWINGS MAY REQUIRE ADDITIONAL CONDITIONAL TREATMENT OTHER THAN NOTED ON THE PLANS. SEE TREE INVENTORY AND TREE PRESERVATION DETAILS (ALL TREE PRESERVATION WORK REQUIRED HEREIN IS INCIDENTAL TO 01562 UNLESS OTHERWISE NOTED).
 - CONTRACTOR TO PROVIDE WATER, TREATMENT FOR BORERS AND OTHER INSECTICIDE TREATMENTS FOR TREES TO BE PRESERVED AS NEEDED PER ARBORIST'S RECOMMENDATION. (INCIDENTAL TO 01562 AND 02915 AND NOT PAID FOR SEPARATELY.)
 - PROPOSED TREE SHALL BE PLANTED A MINIMUM OF 5'-0" FROM BACK OF CURB AND NO CLOSER THAN 20' O.C. FROM EACH OTHER. TREE MITIGATION PLACEMENT DISTANCES FROM MEDIAN TPZ ENDS SHALL BE 50'-0" AT NON-SIGNALIZED INTERSECTIONS, AND 75'-0" AT SIGNALIZED INTERSECTIONS.
 - ALL TREE MITIGATION MATERIALS AND LABOR REQUIRED TO PROVIDE AND INSTALL THE PROPOSED TREES SHALL BE INCIDENTAL TO 02915 - TREE PLANTING.
 - CONTRACTOR TO SUBMIT MEANS AND METHODS OF WATERING PROCEDURES FOR NEWLY PLANTED TREES TO ARBORIST FOR REVIEW AND APPROVAL.
 - CONTRACTOR TO WARRANT, PROVIDE WATER, AND MAINTENANCE FOR ALL NEWLY PLANTED TREES FOR A PERIOD OF TWO (2) YEARS FROM DATE OF SUBSTANTIAL COMPLETION TO SUSTAIN HEALTH OF TREE. (INCIDENTAL TO 02915 - TREE PLANTING AND NOT PAID FOR SEPARATELY.)
 - CONTRACTOR TO EXERCISE CAUTION WHEN WORKING AROUND ALL EXISTING TREES REGARDLESS OF SPECIFIC MEASURES THAT ARE NOTED ON THESE PLANS AND DETAILS AT ALL TIMES AND TO THE EXTENT REQUIRED BY THE CONTRACT DOCUMENTS, SPECIFICALLY 01562.

GENERAL NOTES

- PROVIDE CHECKER PLATE OVER ROOT FLARE SEE DETAIL 1, SHEET 306.
- PROVIDE ZERO CURB CUT CONTINUOUS SEE DETAIL 4, SHEET 305.
- UNDEVELOPED PROPERTY - TREE REMOVAL AREA - NO MITIGATION REQUIRED. (INCIDENTAL TO CLEARING AND GRUBBING AND NOT PAID FOR SEPARATELY. SEE ENGINEERING PLANS FOR MORE INFORMATION.)
- REMOVE SHRUB(S) AS NEEDED TO ACCOMMODATE PROPOSED IMPROVEMENTS (INCIDENTAL TO 01562)
- REDUCE SIDEWALK WIDTH TO 4'-0" AND ADJUST PROPOSED SIDEWALK ("BUMP OUT") AT EXISTING TREE ROOT FLARE (INCIDENTAL AND NOT PAID FOR SEPARATELY)

PROPOSED PLANTING: CONTRACTOR SHALL MARK TREE LOCATIONS PRIOR TO PLANTING FOR APPROVAL BY CITY FORESTER AND CITY ENGINEER

TYPE	ABR.	BOTANICAL NAME	COMMON NAME	PLANTED SIZE
○	QV	QUERCUS VIRGINIANA	LIVE OAK	4" CAL. MIN.
○	UC	ULMUS CRASSIFOLIA	CEDAR ELM	4" CAL. MIN.
○	LJ	LAGERSTROEMIA INDICA	CREPE MYRTLE	3" MULTI TRUNK
✕			REMOVE TREE (INCIDENTAL TO 01562)	

*SEE PLANT LIST ON TREE PRESERVATION DETAILS FOR MORE INFORMATION

PLAN NOTES

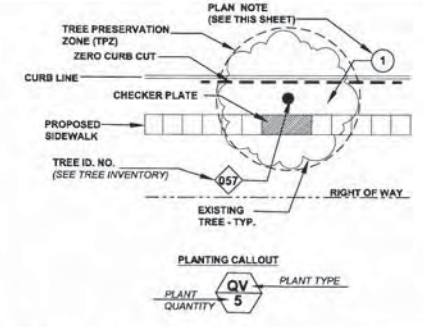
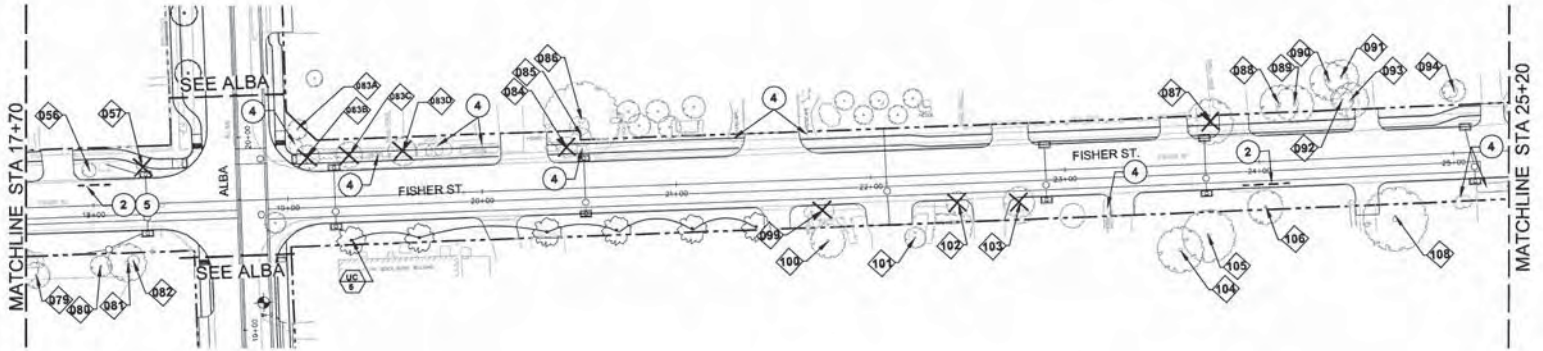
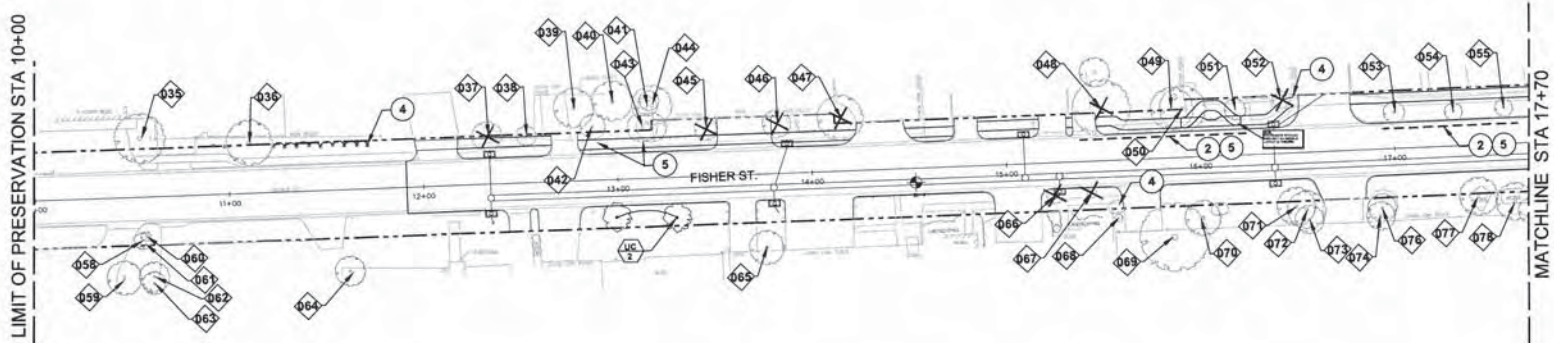


CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

TREE PRESERVATION PLANS
JUDIWAY ST. AND WAKEFIELD ST.

WBS NUMBER	M400285-0001-4
DRAWING SCALE	SCALE: 1" = 30'-0"
CITY OF HOUSTON PM	JOFFREY T. HALL, P.E.
DATE	11/28/19
SHEET NO.	287 OF 383



PRESERVED TREE DIAGRAM

- PLAN NOTE (SEE THIS SHEET)**
- CONTRACTOR SHALL SEEK PRIOR APPROVAL FROM THE ARBORIST, CITY URBAN FORESTER, AND CITY'S REPRESENTATIVE PRIOR TO INITIATION OF TREE REMOVAL AND/OR TREE PROTECTION ACTIVITIES WITHIN THE PROJECT SCOPE OF WORK. IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE CITY OF HOUSTON.
 - IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INSURE THAT NO DAMAGE TO EXISTING TREES TO BE PROTECTED AND/OR THOSE THAT HAVE THEIR TRUNKS OUTSIDE OF THE PROJECT LIMITS BUT HAVE SIGNIFICANT BRANCH OVERHANG INTO THE PROJECT LIMITS.
 - THE CONTRACTOR SHALL NOT, AT ANY TIME, PARK CONSTRUCTION VEHICLES, MATERIALS, OR EQUIPMENT INSIDE OF THE TREE PROTECTION ZONE (TPZ) OF TREES TO BE PROTECTED.
 - SEE TREE PRESERVATION DETAILS AND SPECIFICATIONS FOR DISPOSITION AND CONDITIONAL TREATMENT OF TREES NOTED ON THE DRAWINGS.
 - ALL NOTED TREES ON DRAWINGS MAY REQUIRE ADDITIONAL CONDITIONAL TREATMENT OTHER THAN NOTED ON THE PLANS. SEE TREE INVENTORY AND TREE PRESERVATION DETAILS (ALL TREE PRESERVATION WORK REQUIRED HEREIN IS INCIDENTAL TO 01562 UNLESS OTHERWISE NOTED).
 - CONTRACTOR TO PROVIDE WATER, TREATMENT FOR BORERS AND OTHER INSECTICIDE TREATMENTS FOR TREES TO BE PRESERVED AS NEEDED PER ARBORIST'S RECOMMENDATION. (INCIDENTAL TO 01562 AND 02915 AND NOT PAID FOR SEPARATELY.)
 - PROPOSED TREES SHALL BE PLANTED A MINIMUM OF 5'-0" FROM BACK OF CURB AND NO CLOSER THAN 2X O.C. FROM EACH OTHER. TREE MITIGATION PLACEMENT DISTANCES FROM MEDIAN TIP ENDS SHALL BE 50'-0" AT NON-SIGNALIZED INTERSECTIONS, AND 75'-0" AT SIGNALIZED INTERSECTIONS.
 - ALL TREE MITIGATION MATERIALS AND LABOR REQUIRED TO PROVIDE AND INSTALL THE PROPOSED TREES SHALL BE INCIDENTAL TO 02915 - TREE PLANTING.
 - CONTRACTOR TO SUBMIT MEANS AND METHODS OF WATERING PROCEDURES FOR NEWLY PLANTED TREES TO ARBORIST FOR REVIEW AND APPROVAL.
 - CONTRACTOR TO WARRANT, PROVIDE WATER, AND MAINTENANCE FOR ALL NEWLY PLANTED TREES FOR A PERIOD OF TWO (2) YEARS FROM DATE OF SUBSTANTIAL COMPLETION TO SUSTAIN HEALTH OF TREE. (INCIDENTAL TO 02915 - TREE PLANTING AND NOT PAID FOR SEPARATELY.)
 - CONTRACTOR TO EXERCISE CAUTION WHEN WORKING AROUND ALL EXISTING TREES REGARDLESS OF SPECIFIC MEASURES THAT ARE NOTED ON THESE PLANS AND DETAILS AT ALL TIMES AND TO THE EXTENT REQUIRED BY THE CONTRACT DOCUMENTS, SPECIFICALLY 01562.

GENERAL NOTES

- PROVIDE CHECKER PLATE OVER ROOT FLARE SEE DETAIL 1, SHEET 306.
- PROVIDE ZERO CURB CUT CONTINUOUS SEE DETAIL 4, SHEET 305.
- UNDEVELOPED PROPERTY - TREE REMOVAL AREA - NO MITIGATION REQUIRED. (INCIDENTAL TO CLEARING AND GRUBBING AND NOT PAID FOR SEPARATELY. SEE ENGINEERING PLANS FOR MORE INFORMATION.)
- REMOVE SHRUB(S) AS NEEDED TO ACCOMMODATE PROPOSED IMPROVEMENTS (INCIDENTAL TO 01562)
- REDUCE SIDEWALK WIDTH TO 4'-0" AND ADJUST PROPOSED SIDEWALK ("BUMP OUT") AT EXISTING TREE ROOT FLARE (INCIDENTAL AND NOT PAID FOR SEPARATELY)

PROPOSED PLANTING: CONTRACTOR SHALL MARK TREE LOCATIONS PRIOR TO PLANTING FOR APPROVAL BY CITY FORESTER AND CITY ENGINEER

TYPE	ABR.	BOTANICAL NAME	COMMON NAME	PLANTED SIZE
○	QV	QUERCUS VIRGINIANA	LIVE OAK	4" CAL. MIN.
●	UC	ULMUS CRASSIFOLIA	CEDAR ELM	4" CAL. MIN.
○	LJ	LAGERSTROEMIA INDICA	CREPE MYRTLE	3" MULTI TRUNK
✕			REMOVE TREE (INCIDENTAL TO 01562)	

*SEE PLANT LIST ON TREE PRESERVATION DETAILS FOR MORE INFORMATION

PLAN NOTES

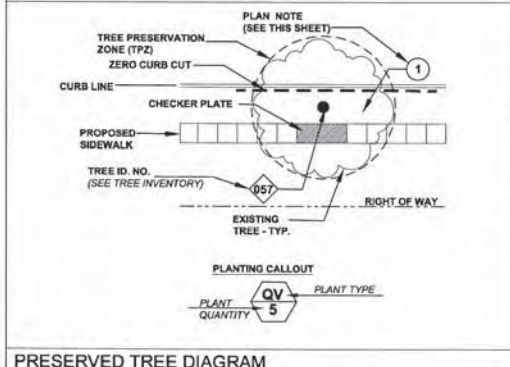
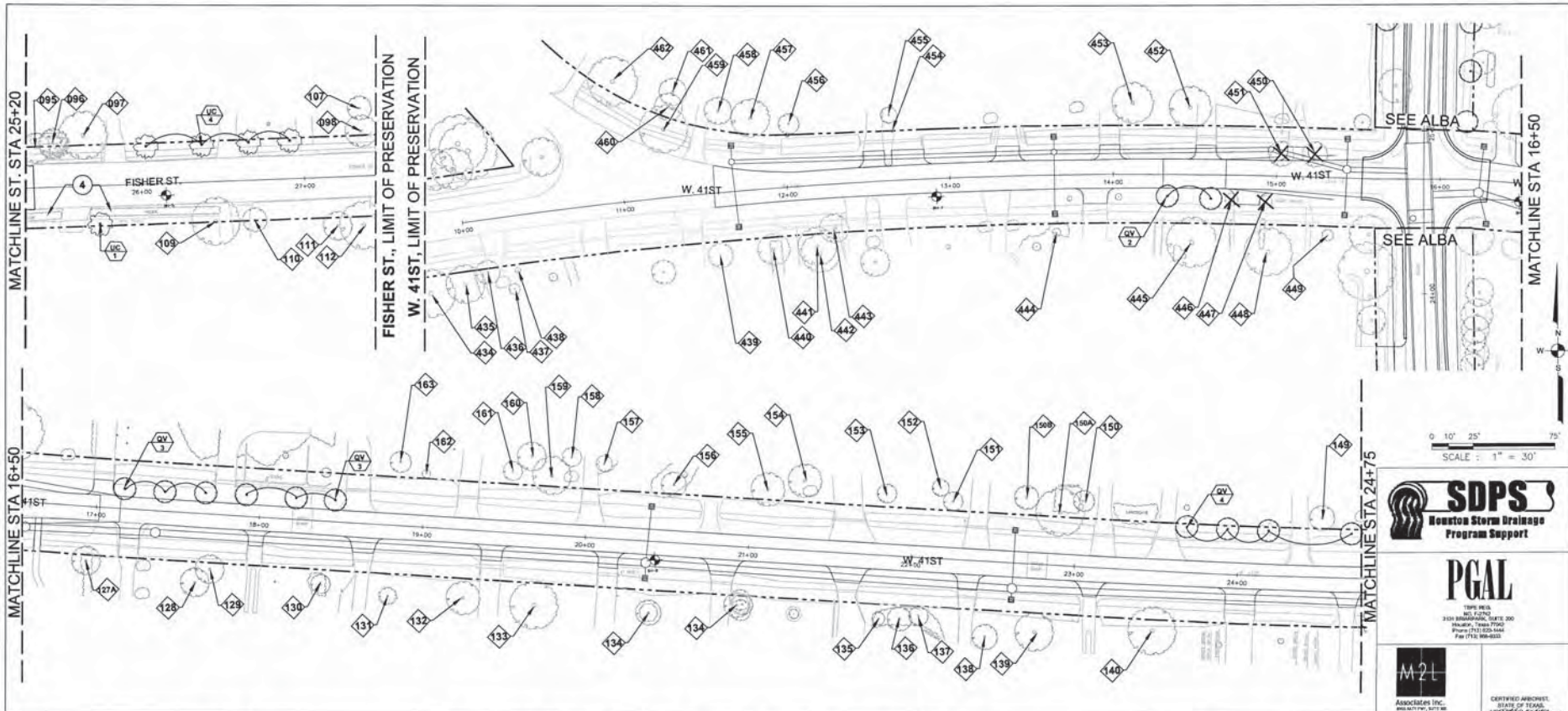


CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

FISHER ST.
TREE PRESERVATION PLANS
10+00 TO 25+20

WSS NUMBER	M-000265-0001-4
DRAWING SCALE	SCALE: 1" = 30'-0"
DATE	02/29/15
SHEET NO.	236 OF 388

5563



GENERAL NOTES

- CONTRACTOR SHALL SEEK PRIOR APPROVAL FROM THE ARBORIST, CITY URBAN FORESTER, AND CITY'S REPRESENTATIVE PRIOR TO INITIATION OF TREE REMOVAL AND/OR TREE PROTECTION ACTIVITIES WITHIN THE PROJECT SCOPE OF WORK. IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE CITY OF HOUSTON.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INSURE THAT NO DAMAGE TO EXISTING TREES TO BE PROTECTED AND/OR THOSE THAT HAVE THEIR TRUNKS OUTSIDE OF THE PROJECT LIMITS BUT HAVE SIGNIFICANT BRANCH OVERHANG INTO THE PROJECT LIMITS.
- THE CONTRACTOR SHALL NOT, AT ANY TIME, PARK CONSTRUCTION VEHICLES, MATERIALS, OR EQUIPMENT INSIDE OF THE TREE PROTECTION ZONE (TPZ) OF TREES TO BE PROTECTED.
- SEE TREE PRESERVATION DETAILS AND SPECIFICATIONS FOR DISPOSITION AND CONDITIONAL TREATMENT OF TREES NOTED ON THE DRAWINGS.
- ALL NOTED TREES ON DRAWINGS MAY REQUIRE ADDITIONAL CONDITIONAL TREATMENT OTHER THAN NOTED ON THE PLANS. SEE TREE INVENTORY AND TREE PRESERVATION DETAILS (ALL TREE PRESERVATION WORK REQUIRED HEREIN IS INCIDENTAL TO 01562 UNLESS OTHERWISE NOTED).
- CONTRACTOR TO PROVIDE WATER, TREATMENT FOR BORERS AND OTHER INSECTICIDE TREATMENTS FOR TREES TO BE PRESERVED AS NEEDED PER ARBORIST'S RECOMMENDATION. (INCIDENTAL TO 01562 AND 02915 AND NOT PAID FOR SEPARATELY.)
- PROPOSED TREE SHALL BE PLANTED A MINIMUM OF 5'-0" FROM BACK OF CURB AND NO CLOSER THAN 20' O.C. FROM EACH OTHER. TREE MITIGATION PLACEMENT DISTANCES FROM MEDIAN TPZ ENDS SHALL BE 50'-0" AT NON-SIGNALIZED INTERSECTIONS, AND 75'-0" AT SIGNALIZED INTERSECTIONS.
- ALL TREE MITIGATION MATERIALS AND LABOR REQUIRED TO PROVIDE AND INSTALL THE PROPOSED TREES SHALL BE INCIDENTAL TO 02915 - TREE PLANTING.
- CONTRACTOR TO SUBMIT MEANS AND METHODS OF WATERING PROCEDURES FOR NEWLY PLANTED TREES TO ARBORIST FOR REVIEW AND APPROVAL.
- CONTRACTOR TO WARRANT, PROVIDE WATER, AND MAINTENANCE FOR ALL NEWLY PLANTED TREES FOR A PERIOD OF TWO (2) YEARS FROM DATE OF SUBSTANTIAL COMPLETION TO SUSTAIN HEALTH OF TREE. (INCIDENTAL TO 02915 - TREE PLANTING AND NOT PAID FOR SEPARATELY.)
- CONTRACTOR TO EXERCISE CAUTION WHEN WORKING AROUND ALL EXISTING TREES REGARDLESS OF SPECIFIC MEASURES THAT ARE NOTED ON THESE PLANS AND DETAILS AT ALL TIMES AND TO THE EXTENT REQUIRED BY THE CONTRACT DOCUMENTS, SPECIFICALLY 01562.

PLAN NOTES

- PROVIDE CHECKER PLATE OVER ROOT FLARE SEE DETAIL 1, SHEET 306.
- PROVIDE ZERO CURB CUT CONTINUOUS SEE DETAIL 4, SHEET 305.
- UNDEVELOPED PROPERTY - TREE REMOVAL AREA - NO MITIGATION REQUIRED. (INCIDENTAL TO CLEARING AND GRUBBING AND NOT PAID FOR SEPARATELY. SEE ENGINEERING PLANS FOR MORE INFORMATION.)
- REMOVE SHRUB(S) AS NEEDED TO ACCOMMODATE PROPOSED IMPROVEMENTS (INCIDENTAL TO 01562)
- REDUCE SIDEWALK WIDTH TO 4'-0" AND ADJUST PROPOSED SIDEWALK ("BUMP OUT") AT EXISTING TREE ROOT FLARE (INCIDENTAL AND NOT PAID FOR SEPARATELY)

PROPOSED PLANTING: CONTRACTOR SHALL MARK TREE LOCATIONS PRIOR TO PLANTING FOR APPROVAL BY CITY FORESTER AND CITY ENGINEER

TYPE	ABR.	BOTANICAL NAME	COMMON NAME	PLANTED SIZE
QV	QV	QUERCUS VIRGINIANA	LIVE OAK	4" CAL. MIN.
UC	UC	ULMUS CRASSIFOLIA	CEDAR ELM	4" CAL. MIN.
LI	LI	LAGERSTROEMIA INDICA	CREPE MYRTLE	3" MULTI TRUNK
X			REMOVE TREE (INCIDENTAL TO 01562)	

*SEE PLANT LIST ON TREE PRESERVATION DETAILS FOR MORE INFORMATION

0 10' 25' 75'
SCALE: 1" = 30'

SDPS
Houston Storm Drainage Program Support

PGAL
1895 WEA
MAY 15, 2002
3101 WINDWARD, SUITE 200
HOUSTON, TEXAS 77057
Phone: (713) 522-8844
Fax: (713) 599-5533

M2L
ASSOCIATES INC.
1800 WEST 17TH STREET
HOUSTON, TEXAS 77008
TEL: 713-522-8844
FAX: 713-599-5533

CERTIFIED ARBORIST
DUSTY DEAN
ARAB 0103

SURVEYED BY: LAMTREC
FIELD NUMBER:

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

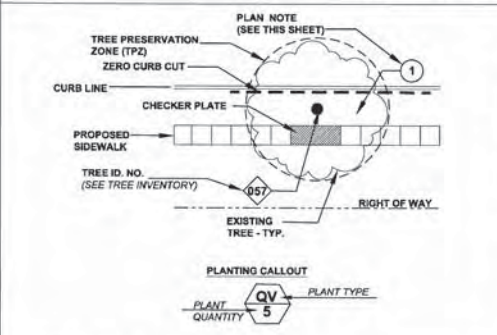
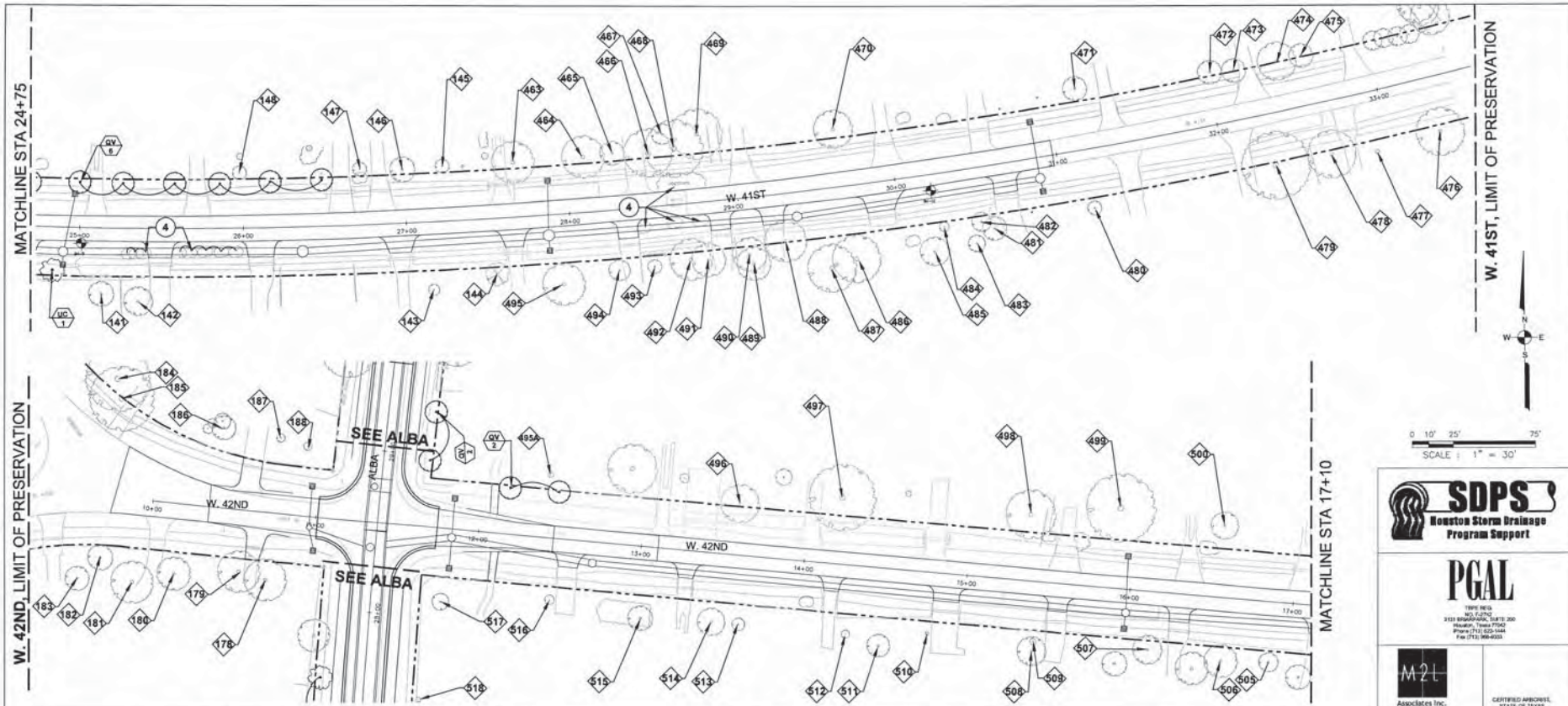
GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING TREE PRESERVATION PLANS FISHER ST.
STA 25+20 TO 27+51
W. 41ST STA 10+00 TO 24+75

WBS NUMBER
M-000285-0001-4

DRAWING SCALE
SCALE: 1" = 30'-0"

CITY OF HOUSTON PW
JEFFREY T. HALL, P.E.
DATE: 02/28/15 SHEET NO.
02/28/15 259 OF 365

55630



PRESERVED TREE DIAGRAM

- GENERAL NOTES**
- CONTRACTOR SHALL SEEK PRIOR APPROVAL FROM THE ARBORIST, CITY URBAN FORESTER, AND CITY'S REPRESENTATIVE PRIOR TO INITIATION OF TREE REMOVAL AND/OR TREE PROTECTION ACTIVITIES WITHIN THE PROJECT SCOPE OF WORK. IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE CITY OF HOUSTON.
 - IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INSURE THAT NO DAMAGE TO EXISTING TREES TO BE PROTECTED AND/OR THOSE THAT HAVE THEIR TRUNKS OUTSIDE OF THE PROJECT LIMITS BUT HAVE SIGNIFICANT BRANCH OVERHANG INTO THE PROJECT LIMITS.
 - THE CONTRACTOR SHALL NOT, AT ANY TIME, PARK CONSTRUCTION VEHICLES, MATERIALS, OR EQUIPMENT INSIDE OF THE TREE PROTECTION ZONE (TPZ) OF TREES TO BE PROTECTED.
 - SEE TREE PRESERVATION DETAILS AND SPECIFICATIONS FOR DISPOSITION AND CONDITIONAL TREATMENT OF TREES NOTED ON THE DRAWINGS.
 - ALL NOTED TREES ON DRAWINGS MAY REQUIRE ADDITIONAL CONDITIONAL TREATMENT OTHER THAN NOTED ON THE PLANS. SEE TREE INVENTORY AND TREE PRESERVATION DETAILS (ALL TREE PRESERVATION WORK REQUIRED HEREIN IS INCIDENTAL TO 01562 UNLESS OTHERWISE NOTED).
 - CONTRACTOR TO PROVIDE WATER, TREATMENT FOR BORERS AND OTHER INSECTICIDE TREATMENTS FOR TREES TO BE PRESERVED AS NEEDED PER ARBORIST'S RECOMMENDATION. (INCIDENTAL TO 01562 AND 02915 AND NOT PAID FOR SEPARATELY.)
 - PROPOSED TREE SHALL BE PLANTED A MINIMUM OF 5'-0" FROM BACK OF CURB AND NO CLOSER THAN 20' O.C. FROM EACH OTHER. TREE MITIGATION PLACEMENT DISTANCES FROM MEDIAN TIP ENDS SHALL BE 50'-0" AT NON-SIGNALIZED INTERSECTIONS, AND 75'-0" AT SIGNALIZED INTERSECTIONS.
 - ALL TREE MITIGATION MATERIALS AND LABOR REQUIRED TO PROVIDE AND INSTALL THE PROPOSED TREES SHALL BE INCIDENTAL TO 02915 - TREE PLANTING.
 - CONTRACTOR TO SUBMIT MEANS AND METHODS OF WATERING PROCEDURES FOR NEWLY PLANTED TREES TO ARBORIST FOR REVIEW AND APPROVAL.
 - CONTRACTOR TO WARRANT, PROVIDE WATER, AND MAINTENANCE FOR ALL NEWLY PLANTED TREES FOR A PERIOD OF TWO (2) YEARS FROM DATE OF SUBSTANTIAL COMPLETION TO SUSTAIN HEALTH OF TREE. (INCIDENTAL TO 02915-TREE PLANTING AND NOT PAID FOR SEPARATELY.)
 - CONTRACTOR TO EXERCISE CAUTION WHEN WORKING AROUND ALL EXISTING TREES REGARDLESS OF SPECIFIC MEASURES THAT ARE NOTED ON THESE PLANS AND DETAILS AT ALL TIMES AND TO THE EXTENT REQUIRED BY THE CONTRACT DOCUMENTS, SPECIFICALLY 01562.

GENERAL NOTES

- PLAN NOTES**
- PROVIDE CHECKER PLATE OVER ROOT FLARE SEE DETAIL 1, SHEET 306.
 - PROVIDE ZERO CURB CUT CONTINUOUS SEE DETAIL 4, SHEET 305.
 - UNDEVELOPED PROPERTY - TREE REMOVAL AREA - NO MITIGATION REQUIRED. (INCIDENTAL TO CLEARING AND GRUBBING AND NOT PAID FOR SEPARATELY. SEE ENGINEERING PLANS FOR MORE INFORMATION.)
 - REMOVE SHRUB(S) AS NEEDED TO ACCOMMODATE PROPOSED IMPROVEMENTS (INCIDENTAL TO 01562)
 - REDUCE SIDEWALK WIDTH TO 4'-0" AND ADJUST PROPOSED SIDEWALK ("BUMP OUT") AT EXISTING TREE ROOT FLARE (INCIDENTAL AND NOT PAID FOR SEPARATELY)
- PROPOSED PLANTING: CONTRACTOR SHALL MARK TREE LOCATIONS PRIOR TO PLANTING FOR APPROVAL BY CITY FORESTER AND CITY ENGINEER**
- | TYPE | ABR. | BOTANICAL NAME | COMMON NAME | PLANTED SIZE |
|------|------|----------------------|-----------------------------------|----------------|
| QV | QV | QUERCUS VIRGINIANA | LIVE OAK | 4" CAL. MIN. |
| UC | UC | ULMUS CRASSIFOLIA | CEDAR ELM | 4" CAL. MIN. |
| LI | LI | LAGERSTROEMIA INDICA | CREPE MYRTLE | 3" MULTI TRUNK |
| X | | | REMOVE TREE (INCIDENTAL TO 01562) | |
- *SEE PLANT LIST ON TREE PRESERVATION DETAILS FOR MORE INFORMATION

PLAN NOTES

SDPS
Houston Storm Drainage Program Support

PGAL
1005 BEUL
803 E. 17th
3535 BRUNNEN, SUITE 300
HOUSTON, TEXAS 77002
Phone: (713) 525-1044
Fax: (713) 566-6533

M2L
ASSOCIATES INC.
1005 BEUL
803 E. 17th
3535 BRUNNEN, SUITE 300
HOUSTON, TEXAS 77002
Phone: (713) 525-1044
Fax: (713) 566-6533

CERTIFIED APPROVAL
DATE OF ISSUE: 04-01-2015

DESIGNED BY: JAMES TERRY
P.E. NO. 140004

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

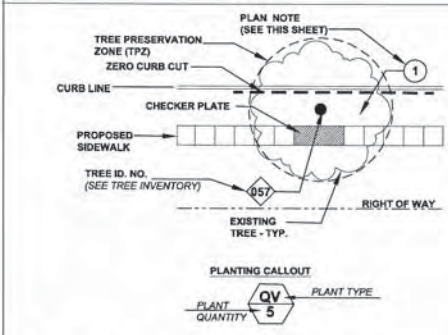
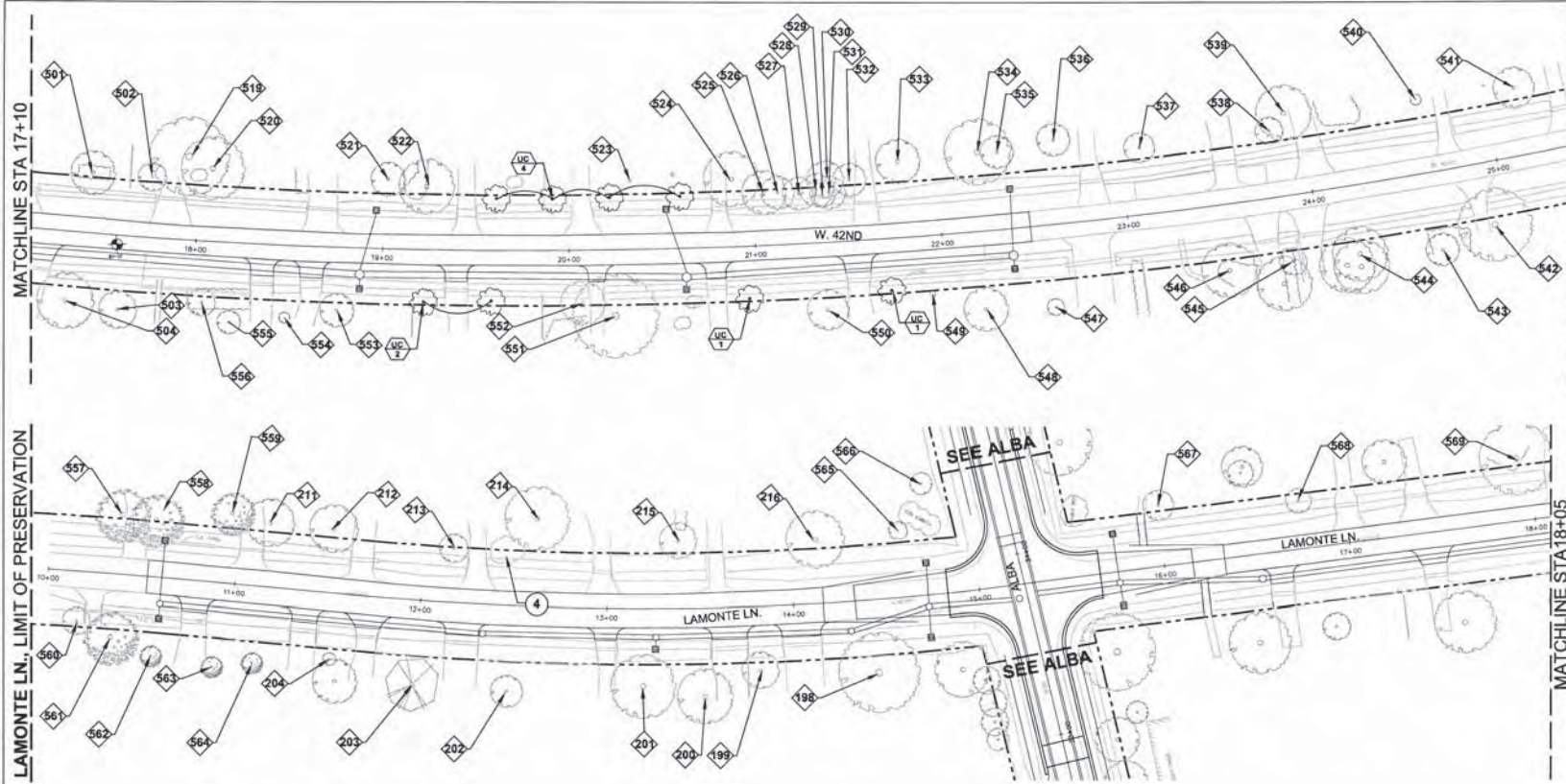
GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING
W. 41ST STA 24+75 TO 33+62
W. 42ND STA 10+00 TO 17+10
TREE PRESERVATION PLANS

WBS NUMBER
M-002285-0001-4

DRAWING SCALE
SCALE: 1" = 30'-0"

CITY OF HOUSTON PM
JEFFREY T. HALL, P.E.

DATE: 02/28/15
SHEET NO: 290 OF 385



PRESERVED TREE DIAGRAM

- GENERAL NOTES**
- CONTRACTOR SHALL SEEK PRIOR APPROVAL FROM THE ARBORIST, CITY URBAN FORESTOR, AND CITY'S REPRESENTATIVE PRIOR TO INITIATION OF TREE REMOVAL AND/OR TREE PROTECTION ACTIVITIES WITHIN THE PROJECT SCOPE OF WORK. IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE CITY OF HOUSTON.
 - IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INSURE THAT NO DAMAGE TO EXISTING TREES TO BE PROTECTED AND/OR THOSE THAT HAVE THEIR TRUNKS OUTSIDE OF THE PROJECT LIMITS BUT HAVE SIGNIFICANT BRANCH OVERHANG INTO THE PROJECT LIMITS.
 - THE CONTRACTOR SHALL NOT, AT ANY TIME, PARK CONSTRUCTION VEHICLES, MATERIALS, OR EQUIPMENT INSIDE OF THE TREE PROTECTION ZONE (TPZ) OF TREES TO BE PROTECTED.
 - SEE TREE PRESERVATION DETAILS AND SPECIFICATIONS FOR DISPOSITION AND CONDITIONAL TREATMENT OF TREES NOTED ON THE DRAWINGS.
 - ALL NOTED TREES ON DRAWINGS MAY REQUIRE ADDITIONAL CONDITIONAL TREATMENT OTHER THAN NOTED ON THE PLANS. SEE TREE INVENTORY AND TREE PRESERVATION DETAILS (ALL TREE PRESERVATION WORK REQUIRED HEREIN IS INCIDENTAL TO THIS UNLESS OTHERWISE NOTED).
 - CONTRACTOR TO PROVIDE WATER, TREATMENT FOR BORERS AND OTHER INSECTICIDE TREATMENTS FOR TREES TO BE PRESERVED AS NEEDED PER ARBORIST'S RECOMMENDATION. (INCIDENTAL TO 01562 AND 02915 AND NOT PAID FOR SEPARATELY.)
 - PROPOSED TREE SHALL BE PLANTED A MINIMUM OF 5'-0" FROM BACK OF CURB AND NO CLOSER THAN 20' O.C. FROM EACH OTHER. TREE MITIGATION PLACEMENT DISTANCES FROM MEDIAN TIP ENDS SHALL BE 50'-0" AT NON-SIGNALIZED INTERSECTIONS, AND 75'-0" AT SIGNALIZED INTERSECTIONS.
 - ALL TREE MITIGATION MATERIALS AND LABOR REQUIRED TO PROVIDE AND INSTALL THE PROPOSED TREES SHALL BE INCIDENTAL TO 02915 - TREE PLANTING.
 - CONTRACTOR TO SUBMIT MEANS AND METHODS OF WATERING PROCEDURES FOR NEWLY PLANTED TREES TO ARBORIST FOR REVIEW AND APPROVAL.
 - CONTRACTOR TO MAINTAIN, PROVIDE WATER, AND MAINTENANCE FOR ALL NEWLY PLANTED TREES FOR A PERIOD OF TWO (2) YEARS FROM DATE OF SUBSTANTIAL COMPLETION TO SUSTAIN HEALTH OF TREE. (INCIDENTAL TO 02915 - TREE PLANTING AND NOT PAID FOR SEPARATELY.)
 - CONTRACTOR TO EXERCISE CAUTION WHEN WORKING AROUND ALL EXISTING TREES REGARDLESS OF SPECIFIC MEASURES THAT ARE NOTED ON THESE PLANS AND DETAILS AT ALL TIMES AND TO THE EXTENT REQUIRED BY THE CONTRACT DOCUMENTS, SPECIFICALLY 01642.

GENERAL NOTES

- PLAN NOTES**
- PROVIDE CHECKER PLATE OVER ROOT FLARE SEE DETAIL 1, SHEET 306.
 - PROVIDE ZERO CURB CUT CONTINUOUS SEE DETAIL 4, SHEET 305.
 - UNDEVELOPED PROPERTY - TREE REMOVAL AREA - NO MITIGATION REQUIRED. (INCIDENTAL TO CLEARING AND GRUBBING AND NOT PAID FOR SEPARATELY. SEE ENGINEERING PLANS FOR MORE INFORMATION.)
 - REMOVE SHRUB(S) AS NEED TO ACCOMMODATE PROPOSED IMPROVEMENTS (INCIDENTAL TO 01562)
 - REDUCE SIDEWALK WIDTH TO 4'-0" AND ADJUST PROPOSED SIDEWALK ("BUMP OUT") AT EXISTING TREE ROOT FLARE/INCIDENTAL AND NOT PAID FOR SEPARATELY)
- PROPOSED PLANTING: CONTRACTOR SHALL MARK TREE LOCATIONS PRIOR TO PLANTING FOR APPROVAL BY CITY FORESTER AND CITY ENGINEER
- | TYPE | ABR. | BOTANICAL NAME | COMMON NAME | PLANTED SIZE |
|------|------|----------------------|-----------------------------------|----------------|
| ● | QV | QUERCUS VIRGINIANA | LIVE OAK | 4" CAL. MIN. |
| ○ | UC | ULMUS CRASSIFOLIA | CEDAR ELM | 4" CAL. MIN. |
| ○ | LI | LAGERSTROEMIA INDICA | CREPE MYRTLE | 3" MULTI TRUNK |
| ✕ | | | REMOVE TREE (INCIDENTAL TO 01562) | |
- *SEE PLANT LIST ON TREE PRESERVATION DETAILS FOR MORE INFORMATION

PLAN NOTES

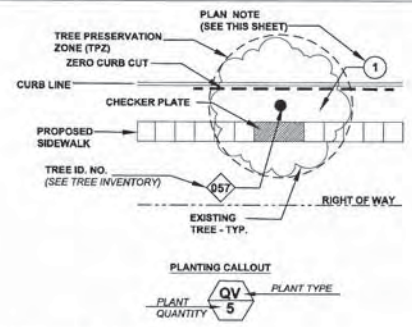
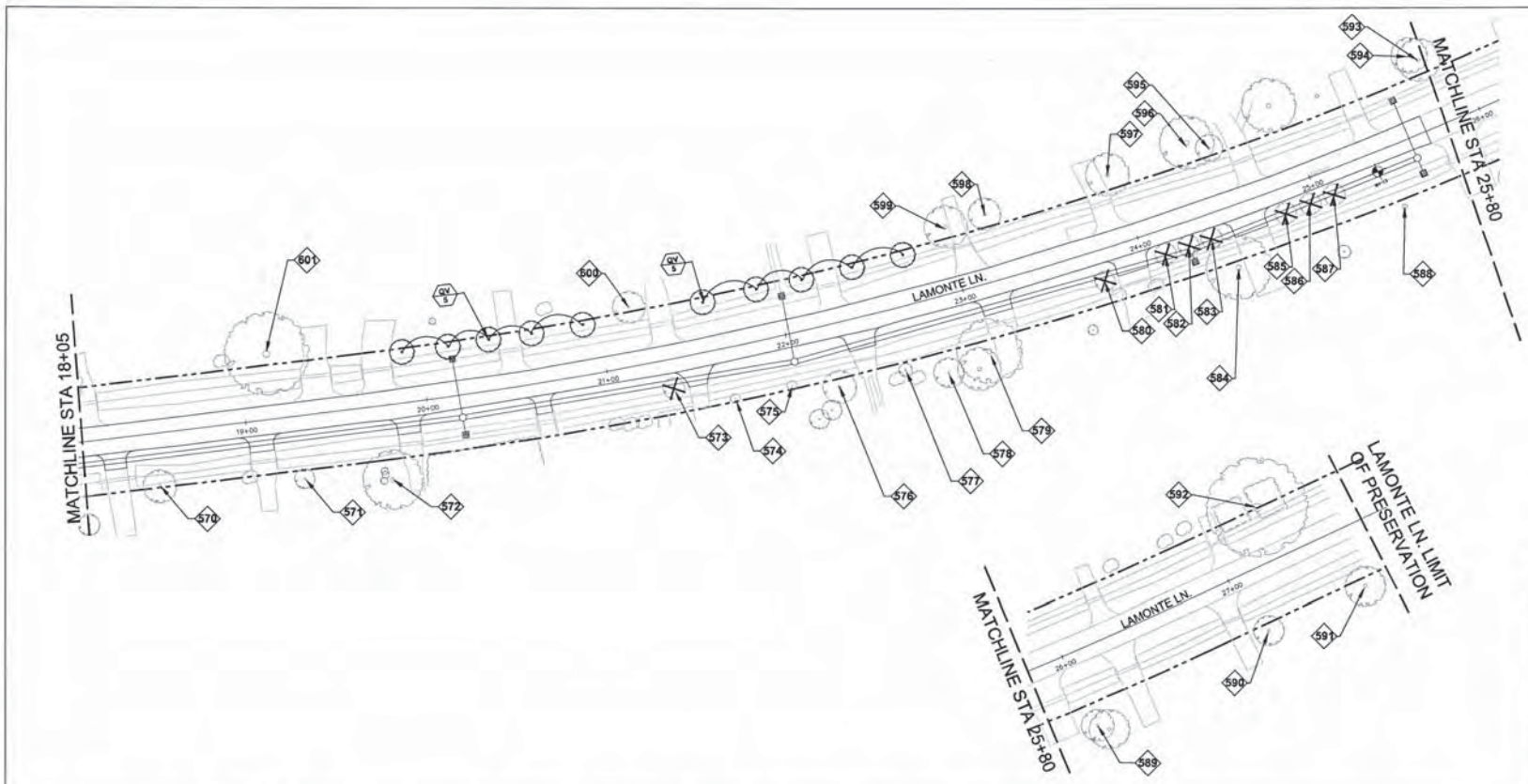


CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND
SHEPHERD PARK (CENTRAL)
DRAINAGE AND PAVING
TREE PRESERVATION PLANS
W. 42ND STA 17+10 TO 25+50
LAMONTE LN.
STA 10+00 TO 18+05

YRS NUMBER	
M 000285-001-4	
DRAWING SCALE	
SCALE: 1" = 30'-0"	
CITY OF HOUSTON PM	
JEFFREY T. HALL, P.E.	
DATE	SHEET NO
02/28/15	231 OF 385

55634



PRESERVED TREE DIAGRAM

- GENERAL NOTES**
- CONTRACTOR SHALL SEEK PRIOR APPROVAL FROM THE ARBORIST, CITY URBAN FORESTER, AND CITY'S REPRESENTATIVE PRIOR TO INITIATION OF TREE REMOVAL AND/OR TREE PROTECTION ACTIVITIES WITHIN THE PROJECT SCOPE OF WORK. IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE CITY OF HOUSTON.
 - IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INSURE THAT NO DAMAGE TO EXISTING TREES TO BE PROTECTED AND/OR THOSE THAT HAVE THEIR TRUNKS OUTSIDE OF THE PROJECT LIMITS BUT HAVE SIGNIFICANT BRANCH OVERHANGS INTO THE PROJECT LIMITS.
 - THE CONTRACTOR SHALL NOT, AT ANY TIME, PARK CONSTRUCTION VEHICLES, MATERIALS, OR EQUIPMENT INSIDE OF THE TREE PROTECTION ZONE (TPZ) OF TREES TO BE PROTECTED.
 - SEE TREE PRESERVATION DETAILS AND SPECIFICATIONS FOR DISPOSITION AND CONDITIONAL TREATMENT OF TREES NOTED ON THE DRAWINGS.
 - ALL NOTED TREES ON DRAWINGS MAY REQUIRE ADDITIONAL CONDITIONAL TREATMENT OTHER THAN NOTED ON THE PLANS. SEE TREE INVENTORY AND TREE PRESERVATION DETAILS (ALL TREE PRESERVATION WORK REQUIRED HEREIN IS INCIDENTAL TO 01562 UNLESS OTHERWISE NOTED).
 - CONTRACTOR TO PROVIDE WATER, TREATMENT FOR BORERS AND OTHER INSECTICIDE TREATMENTS FOR TREES TO BE PRESERVED AS NEEDED PER ARBORIST'S RECOMMENDATION. (INCIDENTAL TO 01562 AND NOT PAID FOR SEPARATELY.)
 - PROPOSED TREE SHALL BE PLANTED A MINIMUM OF 5'-0" FROM BACK OF CURB AND NO CLOSER THAN 20' O.C. FROM EACH OTHER. TREE MITIGATION PLACEMENT DISTANCES FROM MEDIAN TIP ENDS SHALL BE 50'-0" AT NON-SIGNALIZED INTERSECTIONS, AND 75'-0" AT SIGNALIZED INTERSECTIONS.
 - ALL TREE MITIGATION MATERIALS AND LABOR REQUIRED TO PROVIDE AND INSTALL THE PROPOSED TREES SHALL BE INCIDENTAL TO 02915 - TREE PLANTING.
 - CONTRACTOR TO SUBMIT MEANS AND METHODS OF WATERING PROCEDURES FOR NEWLY PLANTED TREES TO ARBORIST FOR REVIEW AND APPROVAL.
 - CONTRACTOR TO WARRANT, PROVIDE WATER, AND MAINTENANCE FOR ALL NEWLY PLANTED TREES FOR A PERIOD OF TWO (2) YEARS FROM DATE OF SUBSTANTIAL COMPLETION TO SUSTAIN HEALTH OF TREE. (INCIDENTAL TO 02915 - TREE PLANTING AND NOT PAID FOR SEPARATELY.)
 - CONTRACTOR TO EXERCISE CAUTION WHEN WORKING AROUND ALL EXISTING TREES REGARDLESS OF SPECIFIC MEASURES THAT ARE NOTED ON THESE PLANS AND DETAILS AT ALL TIMES AND TO THE EXTENT REQUIRED BY THE CONTRACT DOCUMENTS, SPECIFICALLY 01562.

GENERAL NOTES

- PLAN NOTES**
- PROVIDE CHECKER PLATE OVER ROOT FLARE SEE DETAIL 1, SHEET 306.
 - PROVIDE ZERO CURB CUT CONTINUOUS SEE DETAIL 4, SHEET 305.
 - UNDEVELOPED PROPERTY - TREE REMOVAL AREA - NO MITIGATION REQUIRED. (INCIDENTAL TO CLEARING AND GRUBBING AND NOT PAID FOR SEPARATELY. SEE ENGINEERING PLANS FOR MORE INFORMATION.)
 - REMOVE SHRUB(S) AS NEED TO ACCOMMODATE PROPOSED IMPROVEMENTS (INCIDENTAL TO 01562)
 - REDUCE SIDEWALK WIDTH TO 4'-0" AND ADJUST PROPOSED SIDEWALK ("BUMP OUT") AT EXISTING TREE ROOT FLARE (INCIDENTAL AND NOT PAID FOR SEPARATELY)

PROPOSED PLANTING: CONTRACTOR SHALL MARK TREE LOCATIONS PRIOR TO PLANTING FOR APPROVAL BY CITY FORESTER AND CITY ENGINEER

TYPE	ABR.	BOTANICAL NAME	COMMON NAME	PLANTED SIZE
QV	QV	QUERCUS VIRGINIANA	LIVE OAK	4" CAL. MIN.
UC	UC	ULMUS CRASSIFOLIA	CEDAR ELM	4" CAL. MIN.
LI	LI	LAGERSTROMIA INDICA	CREPE MYRTLE	3" MULTI TRUNK
X			REMOVE TREE (INCIDENTAL TO 01562)	

*SEE PLANT LIST ON TREE PRESERVATION DETAILS FOR MORE INFORMATION

PLAN NOTES

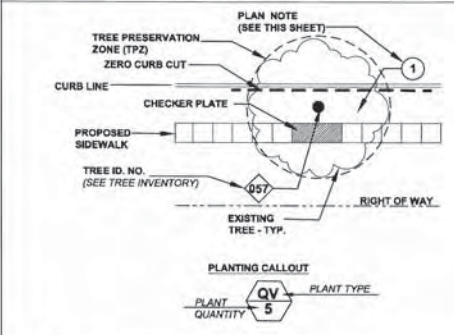
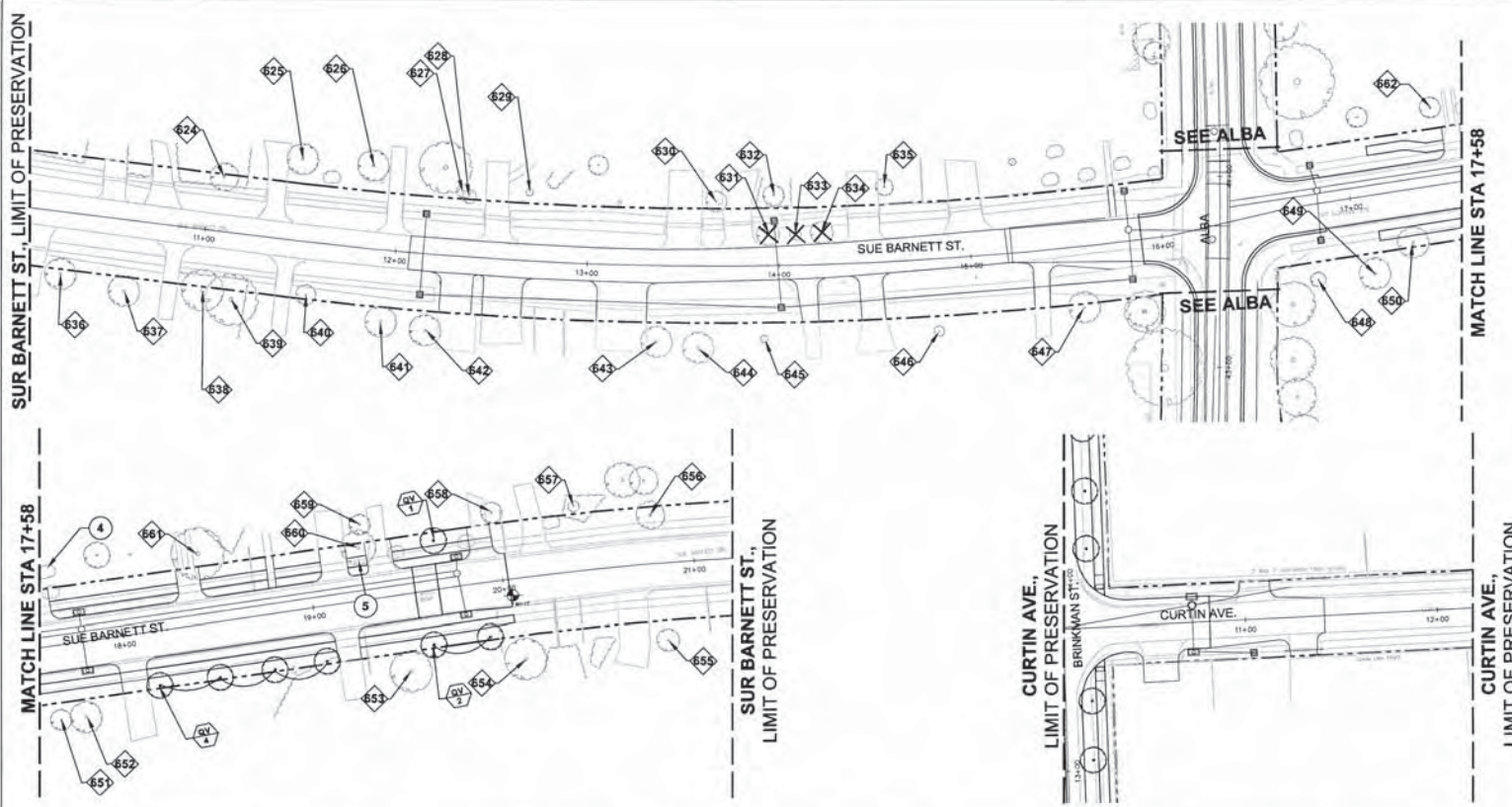


DESIGNED BY: LAMETER
PENG, PHLOX

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING TREE PRESERVATION PLANS
LAMONTE LN.
STA 18+05 TO 25+80
STA 25+80 TO 28+00

WBS NUMBER	
M-00285-001-4	
DRAWING SCALE	
SCALE: 1" = 30'-0"	
CITY OF HOUSTON PM	
JEFFREY T. HALL, P.E.	
DATE	SHEET NO.
02/28/15	292 OF 365

55630



PRESERVED TREE DIAGRAM

- PLAN NOTE (SEE THIS SHEET)**
- CONTRACTOR SHALL SEEK PRIOR APPROVAL FROM THE ARBORIST, CITY URBAN FORESTOR, AND CITY'S REPRESENTATIVE PRIOR TO INITIATION OF TREE REMOVAL AND/OR TREE PROTECTION ACTIVITIES WITHIN THE PROJECT SCOPE OF WORK. IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE CITY OF HOUSTON.
 - IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INSURE THAT NO DAMAGE TO EXISTING TREES TO BE PROTECTED AND/OR THOSE THAT HAVE THEIR TRUNKS OUTSIDE OF THE PROJECT LIMITS BUT HAVE SIGNIFICANT BRANCH OVERHANG INTO THE PROJECT LIMITS.
 - SEE TREE PRESERVATION DETAILS AND SPECIFICATIONS FOR DISPOSITION AND CONDITIONAL TREATMENT OF TREES NOTED ON THE DRAWINGS.
 - THE CONTRACTOR SHALL NOT, AT ANY TIME, PARK CONSTRUCTION VEHICLES, MATERIALS, OR EQUIPMENT INSIDE OF THE TREE PROTECTION ZONE (TPZ) OF TREES TO BE PROTECTED.
 - ALL NOTED TREES ON DRAWINGS MAY REQUIRE ADDITIONAL CONDITIONAL TREATMENT OTHER THAN NOTED ON THE PLANS. SEE TREE INVENTORY AND TREE PRESERVATION DETAILS (ALL TREE PRESERVATION WORK REQUIRED HEREIN IS INCIDENTAL TO 01562 UNLESS OTHERWISE NOTED).
 - CONTRACTOR TO PROVIDE WATER, TREATMENT FOR BORERS AND OTHER INSECTICIDE TREATMENTS FOR TREES TO BE PRESERVED AS NEEDED PER ARBORIST'S RECOMMENDATION. (INCIDENTAL TO 01562 AND 02015 AND NOT PAID FOR SEPARATELY.)
 - PROPOSED TREES SHALL BE PLANTED A MINIMUM OF 5'-0" FROM BACK OF CURB AND NO CLOSER THAN 20' O.C. FROM EACH OTHER. TREE MITIGATION PLACEMENT DISTANCES FROM MEDIAN TPZ ENDS SHALL BE 50'-0" AT NON-SIGNALIZED INTERSECTIONS, AND 75'-0" AT SIGNALIZED INTERSECTIONS.
 - ALL TREE MITIGATION MATERIALS AND LABOR REQUIRED TO PROVIDE AND INSTALL THE PROPOSED TREES SHALL BE INCIDENTAL TO 02015- TREE PLANTING.
 - CONTRACTOR TO SUBMIT MEANS AND METHODS OF WATERING PROCEDURES FOR NEWLY PLANTED TREES TO ARBORIST FOR REVIEW AND APPROVAL.
 - CONTRACTOR TO WARRANT, PROVIDE WATER, AND MAINTENANCE FOR ALL NEWLY PLANTED TREES FOR A PERIOD OF TWO (2) YEARS FROM DATE OF SUBSTANTIAL COMPLETION TO SUSTAIN HEALTH OF TREE. (INCIDENTAL TO 02015-TREE PLANTING AND NOT PAID FOR SEPARATELY.)
 - CONTRACTOR TO EXERCISE CAUTION WHEN WORKING AROUND ALL EXISTING TREES REGARDLESS OF SPECIFIC MEASURES THAT ARE NOTED ON THESE PLANS AND DETAILS AT ALL TIMES AND TO THE EXTENT REQUIRED BY THE CONTRACT DOCUMENTS, SPECIFICALLY 01562.

GENERAL NOTES

- PROVIDE CHECKER PLATE OVER ROOT FLARE SEE DETAIL 1, SHEET 306.
- PROVIDE ZERO CURB CUT CONTINUOUS SEE DETAIL 4, SHEET 305.
- UNDEVELOPED PROPERTY - TREE REMOVAL AREA - NO MITIGATION REQUIRED. (INCIDENTAL TO CLEARING AND GRUBBING AND NOT PAID FOR SEPARATELY. SEE ENGINEERING PLANS FOR MORE INFORMATION.)
- REMOVE SHRUB(S) AS NEEDED TO ACCOMMODATE PROPOSED IMPROVEMENTS (INCIDENTAL TO 01562)
- REDUCE SIDEWALK WIDTH TO 4'-0" AND ADJUST PROPOSED SIDEWALK ("BUMP OUT") AT EXISTING TREE ROOT FLARE (INCIDENTAL AND NOT PAID FOR SEPARATELY)

PROPOSED PLANTING: CONTRACTOR SHALL MARK TREE LOCATIONS PRIOR TO PLANTING FOR APPROVAL BY CITY FORESTER AND CITY ENGINEER

TYPE	ABR.	BOTANICAL NAME	COMMON NAME	PLANTED SIZE
○	QV	QUERCUS VIRGINIANA	LIVE OAK	4" CAL. MIN.
○	UC	ULMUS CRASSIFOLIA	CEDAR ELM	4" CAL. MIN.
○	LI	LAGERSTROEMIA INDICA	CREPE MYRTLE	3" MULTI TRUNK
X			REMOVE TREE (INCIDENTAL TO 01562)	

*SEE PLANT LIST ON TREE PRESERVATION DETAILS FOR MORE INFORMATION

PLAN NOTES

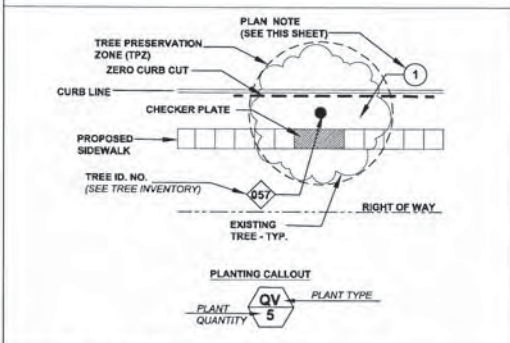
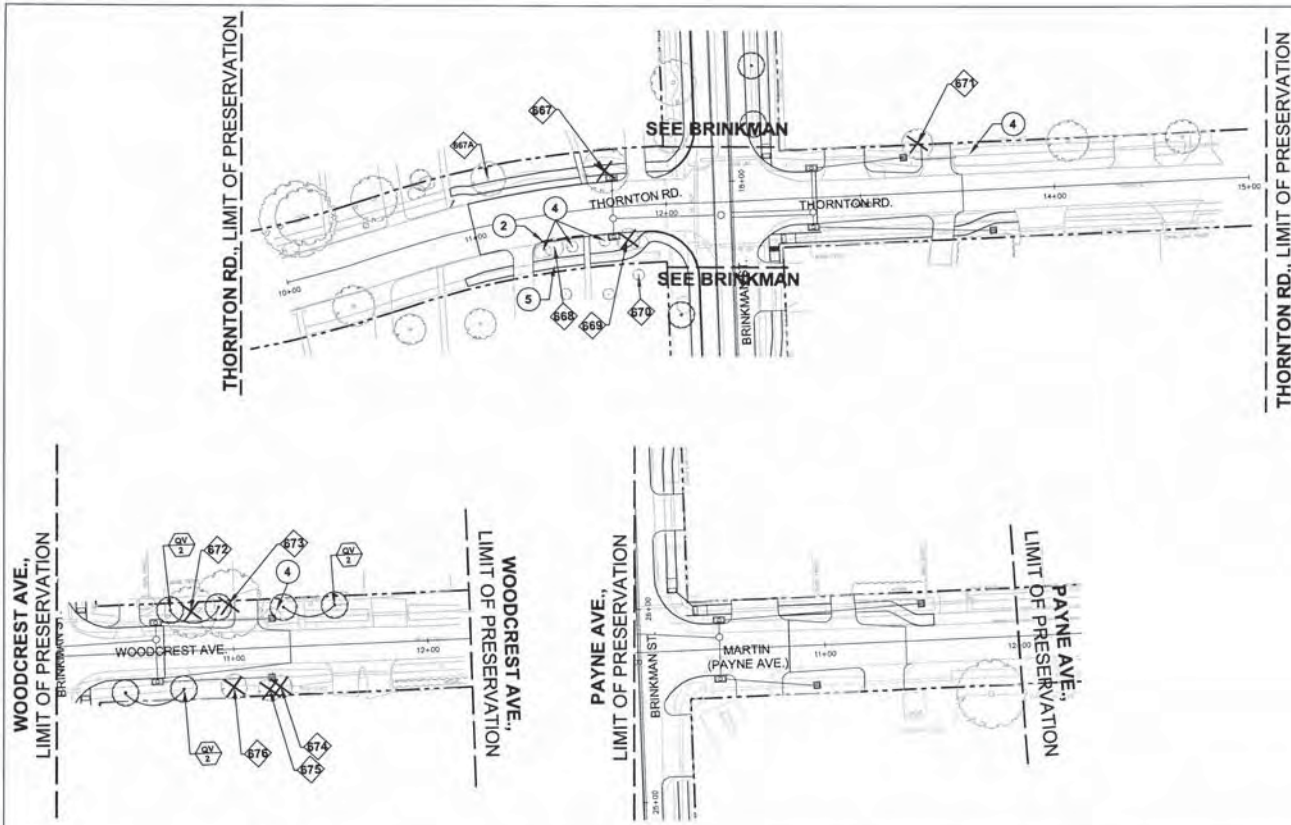


SUBMITTED BY: LAMBERTON
 FE NO. P-60554
CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING TREE PRESERVATION PLANS SUR BARNETT ST. AND CURTIN AVE.

WBS NUMBER	M-00285-0001-4
DRAWING SCALE	SCALE: 1" = 30'-0"
CITY OF HOUSTON PM	JEFFREY T. HALL, P.E.
DATE	02/28/15
SHEET NO.	294 OF 385

55630



PRESERVED TREE DIAGRAM

- A. CONTRACTOR SHALL SEEK PRIOR APPROVAL FROM THE ARBORIST, CITY URBAN FORESTER, AND CITY'S REPRESENTATIVE PRIOR TO INITIATION OF TREE REMOVAL AND/OR TREE PROTECTION ACTIVITIES WITHIN THE PROJECT SCOPE OF WORK. IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE CITY OF HOUSTON.
- B. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INSURE THAT NO DAMAGE TO EXISTING TREES TO BE PROTECTED AND/OR THOSE THAT HAVE THEIR TRUNKS OUTSIDE OF THE PROJECT LIMITS BUT HAVE SIGNIFICANT BRANCH OVERHANG INTO THE PROJECT LIMITS.
- C. THE CONTRACTOR SHALL NOT, AT ANY TIME, PARK CONSTRUCTION VEHICLES, MATERIALS, OR EQUIPMENT INSIDE OF THE TREE PROTECTION ZONE (TPZ) OF TREES TO BE PROTECTED.
- D. SEE TREE PRESERVATION DETAILS AND SPECIFICATIONS FOR DISPOSITION AND CONDITIONAL TREATMENT OF TREES NOTED ON THE DRAWINGS.
- E. ALL NOTED TREES ON DRAWINGS MAY REQUIRE ADDITIONAL CONDITIONAL TREATMENT OTHER THAN NOTED ON THE PLANS. SEE TREE INVENTORY AND TREE PRESERVATION DETAILS (ALL TREE PRESERVATION WORK REQUIRED HEREIN IS INCIDENTAL TO 01562 UNLESS OTHERWISE NOTED).
- F. CONTRACTOR TO PROVIDE WATER, TREATMENT FOR BORERS AND OTHER INSECTICIDE TREATMENTS FOR TREES TO BE PRESERVED AS NEEDED PER ARBORIST'S RECOMMENDATION. INCIDENTAL TO 01562 AND 02915 AND NOT PAID FOR SEPARATELY.
- G. PROPOSED TREE SHALL BE PLANTED A MINIMUM OF 8'-0" FROM BACK OF CURB AND NO CLOSER THAN 20'-0" FROM EACH OTHER. TREE MITIGATION PLACEMENT DISTANCES FROM MEDIAN TP ENDS SHALL BE 50'-0" AT NON-SIGNALIZED INTERSECTIONS, AND 75'-0" AT SIGNALIZED INTERSECTIONS.
- H. ALL TREE MITIGATION MATERIALS AND LABOR REQUIRED TO PROVIDE AND INSTALL THE PROPOSED TREES SHALL BE INCIDENTAL TO 02915 - TREE PLANTING.
- I. CONTRACTOR TO SUBMIT MEANS AND METHODS OF WATERING PROCEDURES FOR NEWLY PLANTED TREES TO ARBORIST FOR REVIEW AND APPROVAL.
- J. CONTRACTOR TO WARRANT, PROVIDE WATER, AND MAINTENANCE FOR ALL NEWLY PLANTED TREES FOR A PERIOD OF TWO (2) YEARS FROM DATE OF SUBSTANTIAL COMPLETION TO SUSTAIN HEALTH OF TREE. (INCIDENTAL TO 02915 - TREE PLANTING AND NOT PAID FOR SEPARATELY.)
- K. CONTRACTOR TO EXERCISE CAUTION WHEN WORKING AROUND ALL EXISTING TREES REGARDLESS OF SPECIFIC MEASURES THAT ARE NOTED ON THESE PLANS AND DETAILS AT ALL TIMES AND TO THE EXTENT REQUIRED BY THE CONTRACT DOCUMENTS, SPECIFICALLY 01562.

GENERAL NOTES

1. PROVIDE CHECKER PLATE OVER ROOT FLARE SEE DETAIL 1, SHEET 306.
2. PROVIDE ZERO CURB CUT CONTINUOUS SEE DETAIL 4, SHEET 305.
3. UNDEVELOPED PROPERTY - TREE REMOVAL AREA - NO MITIGATION REQUIRED. (INCIDENTAL TO CLEARING AND GRUBBING AND NOT PAID FOR SEPARATELY. SEE ENGINEERING PLANS FOR MORE INFORMATION.)
4. REMOVE SHRUB(S) AS NEED TO ACCOMMODATE PROPOSED IMPROVEMENTS (INCIDENTAL TO 01562)
5. REDUCE SIDEWALK WIDTH TO 4'-0" AND ADJUST PROPOSED SIDEWALK ("BUMP OUT") AT EXISTING TREE ROOT FLARE (INCIDENTAL AND NOT PAID FOR SEPARATELY)

PROPOSED PLANTING: CONTRACTOR SHALL MARK TREE LOCATIONS PRIOR TO PLANTING FOR APPROVAL BY CITY FORESTER AND CITY ENGINEER

TYPE	ABR.	BOTANICAL NAME	COMMON NAME	PLANTED SIZE
○	QV	QUERCUS VIRGINIANA	LIVE OAK	4" CAL. MIN.
○	UC	ULMUS CRASSIFOLIA	CEDAR ELM	4" CAL. MIN.
○	LJ	LAGERSTROEMIA INDICA	CREPE MYRTLE	3" MULTI TRUNK
✕			REMOVE TREE (INCIDENTAL TO 01562)	

*SEE PLANT LIST ON TREE PRESERVATION DETAILS FOR MORE INFORMATION

PLAN NOTES

SDPS
Houston Storm Drainage
Program Support

PGAL
THE REG.
REGISTERED PROFESSIONAL ENGINEER
1515 HOUSTON, SUITE 300
HOUSTON, TEXAS 77056
PHONE (713) 553-4644
FAX (713) 553-4653

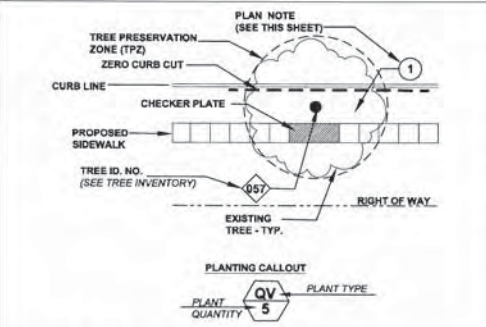
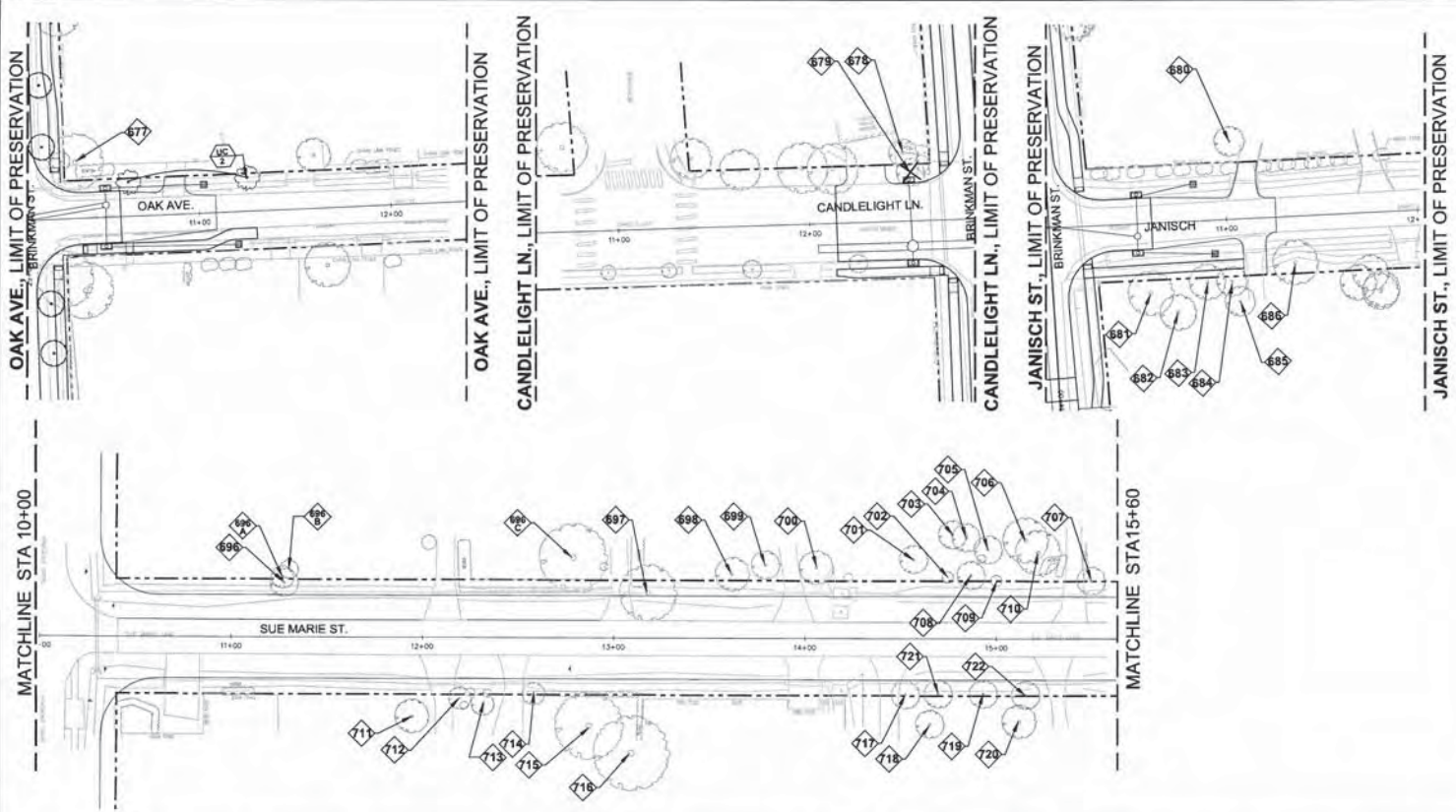
M2L
Associates Inc.
PROFESSIONAL ARCHITECT
Houston, Texas 77056
1515 HOUSTON, SUITE 300
HOUSTON, TEXAS 77056
PHONE (713) 553-4644
FAX (713) 553-4653

CERTIFIED ARCHITECT
STATE OF TEXAS
LICENSE NO. 11468
MAY 2014

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

**GARDEN OAKS AND
SHEPHERD PARK (CENTRAL)
DRAINAGE AND PAVING
TREE PRESERVATION PLANS**
THORNTON RD.,
WOODCREST AVE.,
AND
PAYNE AVE.

WBS NUMBER M-00285-001-4	
DRAWING SCALE SCALE: 1" = 30'-0"	
CITY OF HOUSTON P.W.	
DATE SHEET NO. 02/28/15 2/25 OF 385	



PRESERVED TREE DIAGRAM

- PLAN NOTE (SEE THIS SHEET)**
- CONTRACTOR SHALL SEEK PRIOR APPROVAL FROM THE ARBORIST, CITY URBAN FORESTER, AND CITY'S REPRESENTATIVE PRIOR TO INITIATION OF TREE REMOVAL AND/OR TREE PROTECTION ACTIVITIES WITHIN THE PROJECT SCOPE OF WORK. IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE CITY OF HOUSTON.
 - IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INSURE THAT NO DAMAGE TO EXISTING TREES TO BE PROTECTED AND/OR THOSE THAT HAVE THEIR TRUNKS OUTSIDE OF THE PROJECT LIMITS BUT HAVE SIGNIFICANT BRANCH OVERHANG INTO THE PROJECT LIMITS.
 - THE CONTRACTOR SHALL NOT, AT ANY TIME, PARK CONSTRUCTION VEHICLES, MATERIALS, OR EQUIPMENT INSIDE OF THE TREE PROTECTION ZONE (TPZ) OF TREES TO BE PROTECTED.
 - SEE TREE PRESERVATION DETAILS AND SPECIFICATIONS FOR DISPOSITION AND CONDITIONAL TREATMENT OF TREES NOTED ON THE DRAWINGS.
 - ALL NOTED TREES ON DRAWINGS MAY REQUIRE ADDITIONAL CONDITIONAL TREATMENT OTHER THAN NOTED ON THE PLANS. SEE TREE INVENTORY AND TREE PRESERVATION DETAILS (ALL TREE PRESERVATION WORK REQUIRED HEREIN IS INCIDENTAL TO 01562 UNLESS OTHERWISE NOTED).
 - CONTRACTOR TO PROVIDE WATER, TREATMENT FOR BORERS AND OTHER INSECTICIDE TREATMENTS FOR TREES TO BE PRESERVED AS NEEDED PER ARBORIST'S RECOMMENDATION. (INCIDENTAL TO 01562 AND NOT PAID FOR SEPARATELY.)
 - PROPOSED TREE SHALL BE PLANTED A MINIMUM OF 5'-0" FROM BACK OF CURB AND NO CLOSER THAN 20' O.C. FROM EACH OTHER. TREE MITIGATION PLACEMENT DISTANCES FROM MEDIAN T/P ENDS SHALL BE 50'-0" AT NON-SIGNALIZED INTERSECTIONS, AND 75'-0" AT SIGNALIZED INTERSECTIONS.
 - ALL TREE MITIGATION MATERIALS AND LABOR REQUIRED TO PROVIDE AND INSTALL THE PROPOSED TREES SHALL BE INCIDENTAL TO 02915 - TREE PLANTING.
 - CONTRACTOR TO SUBMIT MEANS AND METHODS OF WATERING PROCEDURES FOR NEWLY PLANTED TREES TO ARBORIST FOR REVIEW AND APPROVAL.
 - CONTRACTOR TO WARRANT, PROVIDE WATER AND MAINTENANCE FOR ALL NEWLY PLANTED TREES FOR A PERIOD OF TWO (2) YEARS FROM DATE OF SUBSTANTIAL COMPLETION TO SUSTAIN HEALTH OF TREE. (INCIDENTAL TO 02915 - TREE PLANTING AND NOT PAID FOR SEPARATELY.)
 - CONTRACTOR TO EXERCISE CAUTION WHEN WORKING AROUND ALL EXISTING TREES REGARDLESS OF SPECIFIC MEASURES THAT ARE NOTED ON THESE PLANS AND DETAILS AT ALL TIMES AND TO THE EXTENT REQUIRED BY THE CONTRACT DOCUMENTS, SPECIFICALLY 01562.

GENERAL NOTES

- PROVIDE CHECKER PLATE OVER ROOT FLARE SEE DETAIL 1, SHEET 306.
- PROVIDE ZERO CURB CUT CONTINUOUS SEE DETAIL 4, SHEET 305.
- UNDEVELOPED PROPERTY - TREE REMOVAL AREA - NO MITIGATION REQUIRED. (INCIDENTAL TO CLEARING AND GRUBBING AND NOT PAID FOR SEPARATELY. SEE ENGINEERING PLANS FOR MORE INFORMATION.)
- REMOVE SHRUB(S) AS NEEDED TO ACCOMMODATE PROPOSED IMPROVEMENTS (INCIDENTAL TO 01562)
- REDUCE SIDEWALK WIDTH TO 4'-0" AND ADJUST PROPOSED SIDEWALK ("BUMP UP") AT EXISTING TREE ROOT FLARE (INCIDENTAL AND NOT PAID FOR SEPARATELY)

PROPOSED PLANTING: CONTRACTOR SHALL MARK TREE LOCATIONS PRIOR TO PLANTING FOR APPROVAL BY CITY FORESTER AND CITY ENGINEER

TYPE	ABR.	BOTANICAL NAME	COMMON NAME	PLANTED SIZE
○	QV	QUERCUS VIRGINIANA	LIVE OAK	4" CAL. MIN.
○	UC	ULMUS CRASSIFOLIA	CEDAR ELM	4" CAL. MIN.
○	LI	LAGERSTROEMIA INDICA	CREPE MYRTLE	3" MULTI TRUNK
⊗		REMOVE TREE (INCIDENTAL TO 01562)		

*SEE PLANT LIST ON TREE PRESERVATION DETAILS FOR MORE INFORMATION

PLAN NOTES



DESIGNED BY: LAMETRON
P.R. NO. 194000

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING TREE PRESERVATION PLANS OAK AVE., CANDLELIGHT LN., JANISCH ST., AND SUE MARIE

WBS NUMBER	M 000285 0001-4
DRAWING SCALE	SCALE: 1" = 30'-0"
CITY OF HOUSTON PW	JEFFREY T. HALL, P.E.
DATE	SHEET NO.
02/28/15	256 OF 365



ID #	STATION	LOCATION	SPECIES	DIA (IN)	CONDITION	STATUS	TREATMENT	MITIGATION
100	21-77	South side of FISHER	Tree Cluster	18.0	Fair	Preserve		No Treatment
101	22-22	South side of FISHER	Magnolia	12.0	Fair	Preserve		No Treatment
102	22-43	South side of FISHER	Crape Myrtle	12.0	Poor	Remove	A	No Replacement
103	22-88	South side of FISHER	Palm	16.0	Fair	Remove	A	No Replacement
104	23-72	South side of FISHER	Verify in Field	24.0	Fair	Preserve		No Treatment
105	23-87	South side of FISHER	Oak	30.0	Fair	Preserve		No Treatment
106	24-00	South side of FISHER	Oak	30.0	Fair	Preserve	B, C, D	Preservation Treatment
107	27-30	North side of FISHER	Verify in Field	18.0	Fair	Preserve		No Treatment
108	24-80	South side of FISHER	Oak	30.0	Fair	Preserve	B, C, D, L	Preservation Treatment
109	26-44	South side of FISHER	Pine	30.0	Fair	Preserve		No Treatment
110	26-82	South side of FISHER	Cedar	15.0	Fair	Preserve		No Treatment
111	27-11	South side of FISHER	Stump	18.0	Poor	Preserve		No Treatment
112	27-32	South side of FISHER	Crape Myrtle	30.0	Fair	Preserve		No Treatment
113	23-25	West side of ALBA	Verify in Field	30.0	Fair	Preserve	B, C, D, L, Q	Preservation Treatment
114	23-80	West side of ALBA	Crape Myrtle	18.0	Fair	Preserve	B, C, D	Preservation Treatment
115	24-15	West side of ALBA	Verify in Field	30.0	Fair	Preserve	B, C, D, G	Preservation Treatment
116	24-35	West side of ALBA	Verify in Field	24.0	Fair	Preserve	B, C, D	Preservation Treatment
117	20-92	East side of ALBA	Oak	18.0	Fair	Preserve		No Treatment
118	23-15	East side of ALBA	Tallow	36.0	Fair	Preserve	B, C, D, Q	Preservation Treatment
118A	23-20	East side of ALBA	Tree Cluster	15.0	Fair	Preserve	B, C, D	Preservation Treatment
119	23-33	East side of ALBA	Tree Cluster	15.0	Fair	Preserve	B	Preservation Treatment
120	23-43	East side of ALBA	Tree Cluster	15.0	Fair	Preserve	B	Preservation Treatment
121	23-50	East side of ALBA	Tree Cluster	15.0	Fair	Remove	A	No Replacement
122	23-80	East side of ALBA	Verify in Field	18.0	Fair	Preserve	B, C	Preservation Treatment
123	23-70	East side of ALBA	Tree Cluster	15.0	Fair	Remove	A	No Replacement
124	23-80	East side of ALBA	Oak	20.0	Fair	Preserve	B, C, D, Q	Preservation Treatment
125	23-85	East side of ALBA	Crape Myrtle	20.0	Fair	Preserve	B, C, D	Preservation Treatment
126	24-00	East side of ALBA	Oak	30.0	Fair	Preserve	B, C, D, Q	Preservation Treatment
127	23-38	East side of ALBA	Crape Myrtle	24.0	Fair	Preserve		No Treatment
127A	24-41	South side of W 41st	Crape Myrtle	18.0	Fair	Preserve		No Treatment
128	17-87	South side of W 41st	Pine	18.0	Fair	Preserve		No Treatment
129	17-85	South side of W 41st	Pine	18.0	Fair	Preserve		No Treatment
130	19-35	South side of W 41st	Verify in Field	12.0	Fair	Preserve		No Treatment
131	19-30	South side of W 41st	Oak	12.0	Fair	Preserve		No Treatment
132	19-35	South side of W 41st	Oak	24.0	Fair	Preserve		No Treatment
133	19-83	South side of W 41st	Pine	30.0	Fair	Preserve		No Treatment
134	21-00	South side of W 41st	Oak	18.0	Fair	Preserve		No Treatment
135	21-80	South side of W 41st	Tree Cluster	8.0	Fair	Preserve		No Treatment
136	22-00	South side of W 41st	Verify in Field	15.0	Fair	Preserve		No Treatment
137	22-11	South side of W 41st	Verify in Field	12.0	Fair	Preserve		No Treatment
138	22-32	South side of W 41st	Oak	18.0	Fair	Preserve		No Treatment
139	23-80	South side of W 41st	Stump	24.0	Poor	Preserve		No Treatment
140	23-48	South side of W 41st	Sweetgum	30.0	Fair	Preserve		No Treatment
141	23-08	South side of W 41st	Oak	18.0	Fair	Preserve		No Treatment
142	23-20	South side of W 41st	Sweetgum	18.0	Fair	Preserve		No Treatment
143	22-10	South side of W 41st	Oak	8.0	Fair	Preserve		No Treatment
144	27-40	South side of W 41st	Magnolia	15.0	Fair	Preserve		No Treatment
145	27-25	North side of W 41st	Oak	18.0	Fair	Preserve		No Treatment
146	27-00	South side of W 41st	Oak	18.0	Fair	Preserve		No Treatment
147	28-85	North side of W 41st	Oak	10.0	Fair	Preserve		No Treatment
148	28-00	North side of W 41st	Oak	10.0	Fair	Preserve		No Treatment
149	28-48	North side of W 41st	Oak	18.0	Fair	Preserve		No Treatment
150	23-05	North side of W 41st	Oak	15.0	Fair	Preserve		No Treatment
150A	22-95	North side of W 41st	Pine	30.0	Fair	Preserve		No Treatment

ID #	STATION	LOCATION	SPECIES	DIA (IN)	CONDITION	STATUS	TREATMENT	MITIGATION
150B	22-75	North side of W 41st	Crape Myrtle	18.0	Fair	Preserve		No Treatment
151	22-10	North side of W 41st	Crape Myrtle	12.0	Fair	Preserve		No Treatment
152	22-05	North side of W 41st	Oak	12.0	Fair	Preserve		No Treatment
153	21-60	North side of W 41st	Verify in Field	12.0	Fair	Preserve		No Treatment
154	21-44	North side of W 41st	Oak	24.0	Fair	Preserve		No Treatment
155	21-10	North side of W 41st	Oak	24.0	Fair	Preserve		No Treatment
156	20-58	North side of W 41st	Verify in Field	4.0	Fair	Preserve		No Treatment
157	20-05	North side of W 41st	Crape Myrtle	15.0	Fair	Preserve		No Treatment
158	19-60	North side of W 41st	Crape Myrtle	12.0	Fair	Preserve		No Treatment
159	19-81	North side of W 41st	Pine	24.0	Fair	Preserve		No Treatment
160	19-88	North side of W 41st	Crape Myrtle	18.0	Fair	Preserve		No Treatment
161	19-55	North side of W 41st	Verify in Field	12.0	Fair	Preserve		No Treatment
162	19-00	North side of W 41st	Oak	6.0	Fair	Preserve		No Treatment
163	19-90	North side of W 41st	Oak	15.0	Fair	Preserve		No Treatment
164	25-05	East side of ALBA	Pine	36.0	Fair	Preserve		No Treatment
165	25-31	East side of ALBA	Crape Myrtle	15.0	Fair	Preserve	B	Preservation Treatment
166	25-90	East side of ALBA	Palm	24.0	Fair	Preserve	B	Preservation Treatment
167	25-05	East side of ALBA	Verify in Field	8.0	Fair	Preserve		No Treatment
168	25-20	East side of ALBA	Verify in Field	6.0	Fair	Preserve	B, C, D	Preservation Treatment
169	25-30	East side of ALBA	Verify in Field	6.0	Fair	Preserve	B, C, D	Preservation Treatment
169A	25-30	East side of ALBA	Verify in Field	6.0	Fair	Preserve	B, C, D	Preservation Treatment
170	25-20	East side of ALBA	Verify in Field	6.0	Fair	Preserve	B, C, D	Preservation Treatment
171	25-00	West side of ALBA	Oak	12.0	Fair	Preserve		No Treatment
172	25-25	West side of ALBA	Oak	24.0	Fair	Remove	A	Replace with 6" inch
173	25-33	West side of ALBA	Oak	20.0	Fair	Preserve	B, C, D	Preservation Treatment
174	25-55	West side of ALBA	Crape Myrtle	18.0	Fair	Remove	A	No Replacement
175	26-79	West side of ALBA	Crape Myrtle	15.0	Fair	Preserve	B, C, D	Preservation Treatment
176	26-87	West side of ALBA	Oak	18.0	Fair	Preserve		No Treatment
177	27-62	West side of ALBA	Tallow	20.0	Fair	Preserve	B, C, D	Preservation Treatment
178	10-02	South side of W 42nd	Oak	30.0	Fair	Preserve		No Treatment
179	10-88	South side of W 42nd	Oak	30.0	Fair	Preserve		No Treatment
180	10-15	South side of W 42nd	Oak	24.0	Fair	Preserve		No Treatment
181	9-92	South side of W 42nd	Oak	30.0	Fair	Preserve		No Treatment
182	9-82	South side of W 42nd	Oak	18.0	Fair	Preserve		No Treatment
183	9-72	South side of W 42nd	Verify in Field	15.0	Fair	Preserve		No Treatment
184	9-55	South side of W 42nd	Palm	36.0	Fair	Preserve		No Treatment
185	9-88	South side of W 42nd	Palm	36.0	Fair	Preserve		No Treatment
186	10-45	South side of W 42nd	Verify in Field	15.0	Fair	Preserve		No Treatment
187	10-78	South side of W 42nd	Oak	8.0	Fair	Preserve		No Treatment
188	10-90	South side of W 42nd	Oak	8.0	Fair	Preserve		No Treatment
189	25-50	West side of ALBA	Pine	36.0	Fair	Preserve	B, C, D, L	Preservation Treatment
189A	26-70	East side of ALBA	Oak	30.0	Fair	Preserve	B, C, D, G	Preservation Treatment
190	29-61	West side of ALBA	Pine	20.0	Fair	Preserve	B, C, D, L	Preservation Treatment
191	30-51	West side of ALBA	Oak	30.0	Fair	Preserve	B, C, D, G	Preservation Treatment
192	31-50	West side of ALBA	Tree Cluster	36.0	Fair	Preserve		No Treatment
193	31-62	West side of ALBA	Oak	12.0	Fair	Preserve		No Treatment
194	33-05	West side of ALBA	Crape Myrtle	12.0	Fair	Preserve		No Treatment
195	33-22	West side of ALBA	Crape Myrtle	15.0	Fair	Preserve		No Treatment
196	33-52	West side of ALBA	Crape Myrtle	15.0	Fair	Preserve		No Treatment
197	33-44	West side of ALBA	Tree Cluster	15.0	Fair	Preserve		No Treatment
197A	33-48	West side of ALBA	Magnolia	30.0	Fair	Preserve	B, C, D, G	Preservation Treatment
198	14-00	South side of LAMONTE	Oak	30.0	Fair	Preserve	B, C, D, N, Q	Preservation Treatment
199	13-50	South side of LAMONTE	Tallow	36.0	Fair	Preserve	B, C, D	Preservation Treatment
200	13-50	South side of LAMONTE	Ficus	30.0	Fair	Preserve	B, C, D, N, Q	Preservation Treatment

TREE INVENTORY TREATMENT LEGEND
 (ALL WORK CONTAINED HEREIN IS INCIDENTAL TO 01562 UNLESS OTHERWISE NOTED)

A. REMOVE TREE & STUMP GRIND, PROVIDE TOPSOIL BACKFILL AND COMPACT TO NATURAL GRADE (TOPSOIL INCIDENTAL)

B. MAINTENANCE PRUNING SEE DETAIL 2, SHEET 305

C. ROOT PRUNING: SEE DETAIL SEE DETAIL 2, SHEET 305

D. TREE PROTECTION FENCING: SEE DETAIL 1, SHEET 305

E. PROVIDE 3" MULCH OVER EXISTING TREE ROOTS WITHOUT COVERING ROOT FLARE (MIN. 5'-0" DIA. OR UP TO 6'-0" FROM BASE OF TREE)

F. ROOT BARRIER AT BACK OF CURB: SEE DETAILS 3 & 5, SHEET 304

G. REMOVE EXISTING SIDEWALK BY HAND IN TREE DRUPLINE, NO BACK HOES OR OTHER MOTORIZED EQUIPMENT IS TO BE USED.

H. CHECKER PLATE INSTALLATION SEE DETAIL 1, SHEET 306

I. ZERO CURB CUT (COORDINATE WITH CIVIL ENGINEERING DRAWINGS, SEE DETAIL 4, SHEET 305)

J. ROOT SHAVING AS NEEDED OR DIRECTED BY ARBORIST OR COH URBAN FORESTOR: SEE SECTION 61562

K. RAISED CONCRETE SIDEWALK OVER EXISTING ROOTS, SEE DETAIL 2, SHEET 306

L. TREE BOARDING: SEE DETAIL 1, SHEET 304

M. TREE TRANSPLANTING (IF REQUIRED)

N. PIPE TRENCHING SEE DETAIL 6, SHEET 305

O. PIPE TUNNELING SEE DETAIL 5, SHEET 305

P. REDUCE SIDEWALK WIDTH TO 4'-0" AND/OR ALTER SIDEWALK ALIGNMENT WITH A "BUMP-OUT" TO ACHIEVE A MINIMUM 6'-0" FROM FACE OF EXISTING TREE TRUNK 3, SHEET 305

Q. PROVIDE ADDITIONAL TREE CANOPY PRUNING FOR TREES THAT HAVE CANOPIES EXTENDING INTO THE ROADWAY WORK OR OTHERWISE CONFLICT WITH PROPOSED CONSTRUCTION ACTIVITIES. TREE CANOPY PRUNING SHALL BE DONE ON ALL SIDES TO BALANCE TREE AND NOT JUST ON THE SIDE OF THE CONSTRUCTION ACTIVITIES WORK ON TREES OUTSIDE OF THE ROW THAT REQUIRE WORK SHALL BE COORDINATED WITH ADJACENT LAND OWNERS.

R. AIR SPADE ONLY (NO HAND DIGGING)



CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING
 TREE INVENTORY
 SHEET 2 of 7

WBS NUMBER	M-00028-00014
DRAWING SCALE	
CITY OF HOUSTON (M)	JEFFREY T. HALL, P.E.
DATE	SHEET NO.
02/28/15	2/8 OF 385

55630

NOT TO SCALE

ID #	STATION	LOCATION	SPECIES	DIA (IN)	CONDITION	STATUS	TREATMENT	MITIGATION
201	151-12	South side of LAMONTE	Oak	40.0	Fair	Preserve	B, C, D, N, Q	Preservation Treatment
202	121-56	South side of LAMONTE	Oak	20.0	Fair	Preserve		No Treatment
203	121-00	South side of LAMONTE	Magnolia	30.0	Fair	Preserve	B, C, D, Q	Preservation Treatment
204	111-66	South side of LAMONTE	Oak	8.0	Fair	Preserve		No Treatment
205	301-11	East side of ALBA	Pine	24.0	Fair	Preserve		No Treatment
206	311-42	East side of ALBA	Pine	30.0	Fair	Preserve		No Treatment
207	311-62	East side of ALBA	Oak	30.0	Fair	Preserve		No Treatment
208	321-75	East side of ALBA	Tallow	24.0	Poor	Preserve	B, C, D	Preservation Treatment
209	321-55	East side of ALBA	Tallow	24.0	Poor	Preserve	B, C, D	Preservation Treatment
210	331-40	East side of ALBA	Oak	43.0	Fair	Preserve		No Treatment
211	111-00	North side of LAMONTE	Oak	30.0	Fair	Preserve	B, C, D	Preservation Treatment
212	111-60	North side of LAMONTE	Oak	30.0	Fair	Preserve	B, C, D	Preservation Treatment
213	121-10	North side of LAMONTE	Oak	18.0	Fair	Preserve	B, C, D, Q	Preservation Treatment
214	121-80	North side of LAMONTE	Oak	40.0	Fair	Preserve	B, C, D, Q	Preservation Treatment
215	131-33	North side of LAMONTE	Tallow	20.0	Fair	Preserve		No Treatment
216	141-11	North side of LAMONTE	Oak	36.0	Fair	Preserve	B, C, D, Q	Preservation Treatment
217	351-83	West side of ALBA	Oak	30.0	Fair	Preserve	C, Q	No Treatment
218	361-15	West side of ALBA	Oak	24.0	Fair	Preserve	C, Q	No Treatment
219	101-06	South side of W 43rd	Oak	24.0	Fair	Preserve		No Treatment
220	91-72	South side of W 43rd	Oak	15.0	Fair	Preserve		No Treatment
221	91-55	South side of W 43rd	Oak	24.0	Fair	Preserve		No Treatment
222	341-53	East side of ALBA	Magnolia	30.0	Fair	Preserve	B, C, D, Q	Preservation Treatment
223	341-06	East side of ALBA	Pecan	36.0	Fair	Preserve	B, C, D, Q	Preservation Treatment
224	351-39	East side of ALBA	Oak	36.0	Fair	Preserve	B, C, D, Q	Preservation Treatment
225	351-70	East side of ALBA	Oak	24.0	Fair	Preserve	B, C, D, Q	Preservation Treatment
226	361-81	East side of ALBA	Oak	30.0	Fair	Preserve	B, C, D, Q	Preservation Treatment
227	121-82	South side of W 43rd	Oak	18.0	Fair	Preserve		No Treatment
228	131-00	South side of W 43rd	Pecan	18.0	Fair	Preserve		No Treatment
229	131-59	South side of W 43rd	Crape Myrtle	12.0	Fair	Preserve		No Treatment
230	151-72	South side of W 43rd	Crape Myrtle	12.0	Fair	Preserve		No Treatment
231	141-01	South side of W 43rd	Verify in Field	4.0	Fair	Preserve		No Treatment
232	131-42	North side of W 43rd	Pine	24.0	Fair	Preserve		No Treatment
233	91-85	North side of W 43rd	Oak	18.0	Fair	Preserve		No Treatment
234	91-92	North side of W 43rd	Oak	18.0	Fair	Preserve		No Treatment
235	361-46	West side of ALBA	Oak	36.0	Fair	Preserve	B, C, D, Q, Q, L	Preservation Treatment
236	401-13	West side of ALBA	Oak	20.0	Fair	Preserve	B, C, D, L	Preservation Treatment
237	411-29	West side of ALBA	Oak	30.0	Fair	Preserve	B, C, D, Q, L	Preservation Treatment
238	411-51	West side of ALBA	Oak	20.0	Fair	Remove	A	Replace Inch For Inch
239	411-99	West side of ALBA	Pine	3.0	Fair	Preserve	B, C, D, L	Preservation Treatment
240	421-13	West side of ALBA	Pine	3.0	Fair	Preserve	B, C, D, L	Preservation Treatment
241	421-20	West side of ALBA	Oak	20.0	Fair	Preserve	B, C, D, L	Preservation Treatment
242	421-99	West side of ALBA	Oak	43.0	Fair	Preserve	B, C, D, E, L, Q	Preservation Treatment
243	421-29	West side of ALBA	Oak	24.0	Fair	Preserve	B, C, D, L	Preservation Treatment
244	441-65	West side of ALBA	Shrub	12.0	Fair	Preserve	B, C, D, Q	Preservation Treatment
245	441-71	West side of ALBA	Verify in Field	20.0	Fair	Preserve	B, C, D, Q	Preservation Treatment
246	471-02	West side of ALBA	Oak	24.0	Fair	Preserve	B, C, D, L, L, Q	Preservation Treatment
247	471-62	West side of ALBA	Oak	24.0	Fair	Preserve	B, C, D, L, L, Q	Preservation Treatment
248	471-84	West side of ALBA	Oak	36.0	Fair	Preserve	B, C, D, L, L, Q	Preservation Treatment
249	131-50	North side of W 43rd	Verify in Field	24.0	Fair	Preserve		No Treatment
250	121-68	North side of W 43rd	Pine	30.0	Fair	Preserve		No Treatment
251	121-42	North side of W 43rd	Oak	18.0	Fair	Preserve		No Treatment
252	121-0	North side of W 43rd	Oak	18.0	Fair	Preserve	B, C, D, L, Q	Preservation Treatment
253	381-74	East side of ALBA	Verify in Field	30.0	Fair	Preserve	B, C, D, Q	Preservation Treatment
254	381-50	East side of ALBA	Verify in Field	15.0	Fair	Preserve	B, C, D, Q	Preservation Treatment

ID #	STATION	LOCATION	SPECIES	DIA (IN)	CONDITION	STATUS	TREATMENT	MITIGATION
255	381-50	East side of ALBA	Crape Myrtle	12.0	Fair	Preserve		No Treatment
256	391-30	East side of ALBA	Shrub	24.0	Fair	Preserve	B, C, D	Preservation Treatment
257	391-80	East side of ALBA	Magnolia	12.0	Fair	Preserve		No Treatment
258	101-73	South side of AZALEA	Oak	24.0	Fair	Preserve	B, C, D, I	Preservation Treatment
259	101-88	South side of AZALEA	Oak	24.0	Fair	Preserve	B, C, D, I	Preservation Treatment
259A	101-86	South side of AZALEA	Oak	10.0	Fair	Preserve	B, C, L, N	Preservation Treatment
260	111-00	South side of AZALEA	Tallow	15.0	Fair	Preserve	B, I	Preservation Treatment
260A	111-05	South side of AZALEA	Verify in Field	15.0	Fair	Preserve	B, I, D	Preservation Treatment
261	401-87	East side of ALBA	Crape Myrtle	10.0	Fair	Remove	A	No Replacement
262	401-93	East side of ALBA	Crape Myrtle	15.0	Fair	Remove	A	No Replacement
263	411-62	East side of ALBA	Crape Myrtle	15.0	Fair	Remove	A	No Replacement
264	411-00	East side of ALBA	Oak	15.0	Fair	Remove	A	Replace Inch For Inch
265	411-09	East side of ALBA	Crape Myrtle	15.0	Fair	Remove	A	No Replacement
266	411-16	East side of ALBA	Crape Myrtle	15.0	Fair	Remove	A	No Replacement
267	411-21	East side of ALBA	Crape Myrtle	15.0	Fair	Remove	A	No Replacement
268	411-54	East side of ALBA	Pine	20.0	Fair	Preserve	B, C, D, L	Preservation Treatment
269	411-55	East side of ALBA	Pine	20.0	Fair	Preserve	B, C, D, L	Preservation Treatment
270	411-64	East side of ALBA	Oak	15.0	Fair	Remove	A	Replace Inch For Inch
271	421-41	East side of ALBA	Pecan	20.0	Fair	Preserve	B, C, D, Q	Preservation Treatment
271A	421-41	East side of ALBA	Oak	20.0	Fair	Preserve	B, C, D	Preservation Treatment
271B	421-41	North side of AZALEA	Oak	20.0	Fair	Preserve	B, I	Preservation Treatment
272	421-67	East side of ALBA	Tallow	20.0	Fair	Preserve	B, C, D, Q	Preservation Treatment
273	421-85	East side of ALBA	Tallow	20.0	Fair	Preserve	B, C, D	Preservation Treatment
274	431-04	East side of ALBA	Verify in Field	24.0	Fair	Preserve	B, C, D, Q	Preservation Treatment
275	431-33	East side of ALBA	Verify in Field	24.0	Fair	Preserve	B, C, D, Q	Preservation Treatment
276	441-48	East side of ALBA	Pine	40.0	Fair	Preserve	B, D	Preservation Treatment
277	441-75	East side of ALBA	Oak	20.0	Fair	Preserve	B, C, D, Q	Preservation Treatment
278	441-82	East side of ALBA	Tree Cluster	10.0	Fair	Remove	A	No Replacement
279	471-03	East side of ALBA	Oak	30.0	Fair	Preserve	B, C, D	Preservation Treatment
280	471-32	East side of ALBA	Verify in Field	15.0	Fair	Preserve	B, C, D	Preservation Treatment
281	471-63	East side of ALBA	Magnolia	18.0	Fair	Remove	A	No Replacement
282	471-87	East side of ALBA	Oak	15.0	Fair	Preserve		No Treatment
283	111-90	South side of CHAMBOARD	Magnolia	18.0	Fair	Preserve	B, D, H	Preservation Treatment
284	121-00	South side of CHAMBOARD	Magnolia	24.0	Fair	Preserve	B, D, H	Preservation Treatment
285	121-22	South side of CHAMBOARD	Crape Myrtle	10.0	Fair	Remove	A	No Replacement
285A	121-82	South side of CHAMBOARD	Crape Myrtle	12.0	Fair	Remove	A	No Replacement
285B	131-00	South side of CHAMBOARD	Crape Myrtle	12.0	Fair	Remove	A	No Replacement
286	121-40	South side of CHAMBOARD	Crape Myrtle	12.0	Fair	Remove	A	No Replacement
287	121-65	South side of CHAMBOARD	Crape Myrtle	15.0	Fair	Remove	A	No Replacement
288	121-89	South side of CHAMBOARD	Crape Myrtle	15.0	Fair	Remove	A	No Replacement
289	131-15	South side of CHAMBOARD	Crape Myrtle	10.0	Fair	Remove	A	No Replacement
290	131-38	South side of CHAMBOARD	Oak	30.0	Fair	Preserve	B, D, G, H, J, L, Q	Preservation Treatment
291	141-00	South side of CHAMBOARD	Magnolia	4.0	Fair	Preserve		No Treatment
292	141-72	South side of CHAMBOARD	Pine	3.0	Fair	Preserve		No Treatment
293	151-61	South side of CHAMBOARD	Oak	24.0	Fair	Preserve	B, C, D, E, L, Q	Preservation Treatment
294		South side of CHAMBOARD	Oak	15.0	Fair	Preserve		No Treatment
295	171-52	South side of CHAMBOARD	Magnolia	8.0	Fair	Preserve		No Treatment
296	181-12	South side of CHAMBOARD	Oak	30.0	Fair	Preserve	B, C, D	Preservation Treatment
297	181-20	South side of CHAMBOARD	Not There					
298	181-75	South side of CHAMBOARD	Oak	30.0	Fair	Preserve	B, C, D, G	Preservation Treatment
299	191-42	South side of CHAMBOARD	Magnolia	18.0	Fair	Preserve	B, C, D, G	Preservation Treatment
300	201-00	South side of CHAMBOARD	Oak	36.0	Fair	Preserve	B, C, D, G, J, Q	Preservation Treatment
301	201-92	South side of CHAMBOARD	Oak	40.0	Fair	Preserve	B, C, D, G, J, D	Preservation Treatment
302	211-00	South side of CHAMBOARD	Crape Myrtle	12.0	Fair	Remove	A	No Replacement

- TREE INVENTORY TREATMENT LEGEND**
(ALL WORK CONTAINED HEREIN IS INCIDENTAL TO 01562 UNLESS OTHERWISE NOTED)
- A. REMOVE TREE & STUMP GRIND. PROVIDE TOPSOIL BACKFILL AND COMPACT TO NATURAL GRADE (TOPSOIL INCIDENTAL)
 - B. MAINTENANCE PRUNING SEE DETAIL 2, SHEET 305
 - C. ROOT PRUNING. SEE DETAIL 2, SHEET 305
 - D. TREE PROTECTION FENCING. SEE DETAIL 1, SHEET 305
 - E. PROVIDE 3" MULCH OVER EXISTING TREE ROOTS WITHOUT COVERING ROOT FLARE (MIN. 5" DIA. OR UP TO 6" FROM BASE OF TREE)
 - F. ROOT BARRIER AT BACK OF CURB. SEE DETAILS 3 & 5 SHEET 304
 - G. REMOVE EXISTING SIDEWALK BY HAND IN TREE DRIFPLENE. NO BACK HOES OR OTHER MOTORIZED EQUIPMENT IS TO BE USED.
 - H. CHECKER PLATE INSTALLATION SEE DETAIL 1, SHEET 306
 - I. ZERO CURB CUT (COORDINATE WITH CIVIL ENGINEERING DRAWINGS. SEE DETAIL 4, SHEET 305)
 - J. ROOT SHAVING AS NEEDED OR DIRECTED BY ARBORIST OR COH URBAN FORESTOR. SEE SECTION 01562
 - K. RAISED CONCRETE SIDEWALK OVER EXISTING ROOTS. SEE DETAIL 2, SHEET 306
 - L. TREE BOARDING. SEE DETAIL 1, SHEET 304
 - M. TREE TRANSPLANTING (IF REQUIRED)
 - N. PIPE TRENCHING SEE DETAIL 6, SHEET 305
 - O. PIPE TUNNELING SEE DETAIL 5, SHEET 305
 - P. REDUCE SIDEWALK WIDTH TO 4'-0" AND/OR ALTER SIDEWALK ALIGNMENT WITH A "BLUMP-OUT" TO ACHIEVE A MINIMUM 6'-0" FROM FACE OF EXISTING TREE TRUNK 3, SHEET 305
 - Q. PROVIDE ADDITIONAL TREE CANOPY PRUNING FOR TREES THAT HAVE CANOPIES EXTENDING INTO THE ROADWAY WORK OR OTHERWISE CONFLICT WITH PROPOSED CONSTRUCTION ACTIVITIES. TREE CANOPY PRUNING SHALL BE DONE ON ALL SIDES TO 'BALANCE' TREE AND NOT JUST ON THE SIDE OF THE CONSTRUCTION ACTIVITIES. WORK ON TREES OUTSIDE OF THE ROW THAT REQUIRE WORK SHALL BE COORDINATED WITH ADJACENT LAND OWNERS.
 - R. AIR SPADE ONLY (NO HAND DIGGING)



SDPS
Houston Storm Drainage
Program Support



PGAL

1395 WES
1615 7271
3101 BROADWAY, SUITE 200
HOUSTON, TEXAS 77020
PHONE (713) 652-1444
FAX (713) 652-0323



Associates Inc.
1615 7271
3101 BROADWAY, SUITE 200
HOUSTON, TEXAS 77020
PHONE (713) 652-1444
FAX (713) 652-0323

CERTIFIED ARBORIST,
STATUS OF TEXAS
LAWRENCE J. MATHIAS
LAWRENCE J. MATHIAS
LAWRENCE J. MATHIAS
LAWRENCE J. MATHIAS
LAWRENCE J. MATHIAS

SERVED BY LANTICH
FIELD #4000

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

**GARDEN OAKS AND
SHEPHERD PARK (CENTRAL)
DRAINAGE AND PAVING**

**TREE INVENTORY
SHEET 3 of 7**

WBS NUMBER	
M-2025-001-A	
DRAWING SCALE	
CITY OF HOUSTON PM	
JEFFREY T. HALL, P.E.	
DATE	SHEET NO.
02/26/15	259 OF 365

5630

NOT TO SCALE

ID#	STATION	LOCATION	SPECIES	DIA (IN)	CONDITION	STATUS	TREATMENT	MITIGATION
428	43+32	East side of BRINKMAN	Pine	18.0	Fair	Preserve	B, D	Preservation Treatment
429	43+31	East side of BRINKMAN	Oak	18.0	Fair	Preserve	B, D	Preservation Treatment
430	43+45	East side of BRINKMAN	Shrub	24.0	Poor	Preserve		No Treatment
431	43+62	East side of BRINKMAN	Oak	15.0	Fair	Preserve	B	Preservation Treatment
432	44+33	East side of BRINKMAN	Pine	24.0	Fair	Preserve	B, D	Preservation Treatment
433	44+31	East side of BRINKMAN	Pine	24.0	Fair	Preserve	B, D	Preservation Treatment
434	44+38	East side of BRINKMAN	Sweetgum	19.0	Fair	Preserve	B, D	Preservation Treatment
435	47+00	East side of BRINKMAN	Tree Clusters	12.0	Fair	Remove	A	No Replacement
436	47+10	East side of BRINKMAN	Oak	8.0	Fair	Remove	A	No Replacement
437	47+20	East side of BRINKMAN	Oak	4.0	Fair	Remove	A	No Replacement
438	47+30	East side of BRINKMAN	Oak	10.0	Fair	Remove	A	No Replacement
439	47+35	East side of BRINKMAN	Oak	18.0	Fair	Remove	A	No Replacement
420	48+44	East side of BRINKMAN	Oak	15.0	Fair	Preserve	B, D	Preservation Treatment
421	10+30	West side of ALDA	Oak	6.0	Fair	Preserve		No Treatment
422	10+30	West side of ALDA	Oak	24.0	Fair	Preserve		No Treatment
423	10+30	West side of ALDA	Oak	24.0	Fair	Preserve		No Treatment
424	10+30	West side of ALDA	Oak	24.0	Fair	Preserve		No Treatment
425	10+30	West side of ALDA	Oak	24.0	Fair	Preserve		No Treatment
426	10+30	West side of ALDA	Oak	24.0	Fair	Preserve		No Treatment
427	10+30	West side of ALDA	Oak	24.0	Fair	Preserve		No Treatment
428	10+30	West side of ALDA	Oak	24.0	Fair	Preserve		No Treatment
429	10+30	West side of ALDA	Oak	24.0	Fair	Preserve		No Treatment
430	10+30	West side of ALDA	Oak	24.0	Fair	Preserve		No Treatment
431	10+30	West side of ALDA	Oak	24.0	Fair	Preserve		No Treatment
432	10+30	West side of ALDA	Oak	24.0	Fair	Preserve		No Treatment
433	10+30	West side of ALDA	Oak	24.0	Fair	Preserve		No Treatment
434	10+30	West side of ALDA	Oak	24.0	Fair	Preserve		No Treatment
435	10+30	West side of ALDA	Oak	24.0	Fair	Preserve		No Treatment
436	10+30	West side of ALDA	Oak	24.0	Fair	Preserve		No Treatment
437	10+30	West side of ALDA	Oak	24.0	Fair	Preserve		No Treatment
438	10+30	West side of ALDA	Oak	24.0	Fair	Preserve		No Treatment
439	10+30	West side of ALDA	Oak	24.0	Fair	Preserve		No Treatment
440	10+30	West side of ALDA	Oak	24.0	Fair	Preserve		No Treatment
441	10+30	West side of ALDA	Oak	24.0	Fair	Preserve		No Treatment
442	10+30	West side of ALDA	Oak	24.0	Fair	Preserve		No Treatment
443	10+30	West side of ALDA	Oak	24.0	Fair	Preserve		No Treatment
444	10+30	West side of ALDA	Oak	24.0	Fair	Preserve		No Treatment
445	10+30	West side of ALDA	Oak	24.0	Fair	Preserve		No Treatment
446	10+30	West side of ALDA	Oak	24.0	Fair	Preserve		No Treatment
447	10+30	West side of ALDA	Oak	24.0	Fair	Preserve		No Treatment
448	10+30	West side of ALDA	Oak	24.0	Fair	Preserve		No Treatment
449	10+30	West side of ALDA	Oak	24.0	Fair	Preserve		No Treatment
450	10+30	West side of ALDA	Oak	24.0	Fair	Preserve		No Treatment
451	10+30	West side of ALDA	Oak	24.0	Fair	Preserve		No Treatment
452	10+30	West side of ALDA	Oak	24.0	Fair	Preserve		No Treatment
453	10+30	West side of ALDA	Oak	24.0	Fair	Preserve		No Treatment
454	10+30	West side of ALDA	Oak	24.0	Fair	Preserve		No Treatment
455	10+30	West side of ALDA	Oak	24.0	Fair	Preserve		No Treatment
456	10+30	West side of ALDA	Oak	24.0	Fair	Preserve		No Treatment
457	10+30	West side of ALDA	Oak	24.0	Fair	Preserve		No Treatment
458	10+30	West side of ALDA	Oak	24.0	Fair	Preserve		No Treatment
459	10+30	West side of ALDA	Oak	24.0	Fair	Preserve		No Treatment
460	10+30	West side of ALDA	Oak	24.0	Fair	Preserve		No Treatment
433A	*		Not Used					
434	39+90	South side of W 41st	Pine	30.0	Fair	Preserve		No Treatment
435	10+00	South side of W 41st	Crape Myrtle	24.0	Fair	Preserve		No Treatment
436	10+05	South side of W 41st	Crape Myrtle	15.0	Fair	Preserve		No Treatment
437	10+15	South side of W 41st	Oak	8.0	Fair	Preserve		No Treatment
438	10+22	South side of W 41st	Oak	4.0	Fair	Preserve		No Treatment
439	11+60	South side of W 41st	Oak	18.0	Fair	Preserve		No Treatment
440	11+80	South side of W 41st	Crape Myrtle	20.0	Fair	Preserve		No Treatment
441	12+11	South side of W 41st	Pine	24.0	Fair	Preserve		No Treatment
442	12+12	South side of W 41st	Pine	24.0	Fair	Preserve		No Treatment
443	12+22	South side of W 41st	Crape Myrtle	18.0	Fair	Preserve		No Treatment
444	13+72	South side of W 41st	Oak	6.0	Fair	Preserve		No Treatment
445	14+40	South side of W 41st	Oak	36.0	Fair	Preserve		No Treatment
446	14+70	South side of W 41st	Crape Myrtle	8.0	Fair	Remove	A	No Replacement
447	14+90	South side of W 41st	Crape Myrtle	8.0	Fair	Remove	A	No Replacement
448	14+90	South side of W 41st	Pine	30.0	Fair	Preserve		No Treatment
449	15+30	South side of W 41st	Oak	8.0	Fair	Preserve		No Treatment
450	15+28	North side of W 41st	Oak	18.0	Fair	Remove	A	Replace with Fir inch
451	15+01	North side of W 41st	Oak	18.0	Fair	Remove	A	Replace with Fir inch
452	14+60	North side of W 41st	Oak	30.0	Fair	Preserve		No Treatment
453	14+10	North side of W 41st	Oak	30.0	Fair	Preserve		No Treatment
454	15+70	North side of W 41st	Oak	3.0	Fair	Preserve		No Treatment
455	12+72	North side of W 41st	Oak	12.0	Fair	Preserve		No Treatment
456	12+00	North side of W 41st	Oak	15.0	Fair	Preserve		No Treatment
457	11+80	North side of W 41st	Pine	24.0	Fair	Preserve		No Treatment
458	11+72	North side of W 41st	Oak	20.0	Fair	Preserve		No Treatment
459	11+22	North side of W 41st	Crape Myrtle	30.0	Fair	Preserve		No Treatment
460	11+25	North side of W 41st	Oak	20.0	Fair	Preserve		No Treatment

PRESERVED TREES DELETED
FROM PROJECT SCOPE

ID#	STATION	LOCATION	SPECIES	DIA (IN)	CONDITION	STATUS	TREATMENT	MITIGATION
461	11+03	North side of W 41st	Oak	20.0	Fair	Preserve		No Treatment
462	11+00	North side of W 41st	Oak	36.0	Fair	Preserve		No Treatment
463	27+60	North side of W 41st	Oak	30.0	Fair	Preserve	B, C, D	Preservation Treatment
464	28+10	North side of W 41st	Oak	30.0	Fair	Preserve	B, C, D	Preservation Treatment
465	28+50	North side of W 41st	Crape Myrtle	15.0	Fair	Preserve		No Treatment
466	20+60	North side of W 41st	Cedar	30.0	Fair	Preserve		No Treatment
467	20+88	North side of W 41st	Oak	15.0	Fair	Preserve		No Treatment
468	28+68	North side of W 41st	Cedar	36.0	Fair	Preserve	B, C, D	Preservation Treatment
469	28+69	North side of W 41st	Oak	30.0	Fair	Preserve	B, C, D	Preservation Treatment
470	26+72	North side of W 41st	Crape Myrtle	24.0	Fair	Preserve		No Treatment
471	31+12	North side of W 41st	Crape Myrtle	15.0	Fair	Preserve		No Treatment
472	32+00	North side of W 41st	Crape Myrtle	15.0	Fair	Preserve		No Treatment
473	32+12	North side of W 41st	Crape Myrtle	15.0	Fair	Preserve		No Treatment
474	32+30	North side of W 41st	Crape Myrtle	24.0	Fair	Preserve		No Treatment
475	32+78	North side of W 41st	Crape Myrtle	15.0	Fair	Preserve		No Treatment
476	33+20	South side of W 41st	Pine	30.0	Fair	Preserve		No Treatment
477	32+90	South side of W 41st	Oak	3.0	Fair	Preserve		No Treatment
478	32+58	South side of W 41st	Verify in Field	30.0	Fair	Preserve		No Treatment
479	32+92	South side of W 41st	Oak	48.0	Fair	Preserve		No Treatment
480	31+10	South side of W 41st	Oak	10.0	Fair	Preserve		No Treatment
481	30+50	South side of W 41st	Verify in Field	15.0	Fair	Preserve		No Treatment
482	30+45	South side of W 41st	Crape Myrtle	12.0	Fair	Preserve		No Treatment
483	30+40	South side of W 41st	Oak	12.0	Fair	Preserve		No Treatment
484	30+32	South side of W 41st	Verify in Field	6.0	Fair	Preserve		No Treatment
485	30+10	South side of W 41st	Pecan	18.0	Fair	Preserve		No Treatment
486	20+62	South side of W 41st	Pine	30.0	Fair	Preserve		No Treatment
487	20+50	South side of W 41st	Pine	30.0	Fair	Preserve		No Treatment
488	20+33	South side of W 41st	Oak	30.0	Fair	Preserve	B, C, D	Preservation Treatment
489	20+05	South side of W 41st	Oak	24.0	Fair	Preserve	B, C, D	Preservation Treatment
490	20+05	South side of W 41st	Oak	24.0	Fair	Preserve	B, C, D	Preservation Treatment
491	20+71	South side of W 41st	Oak	24.0	Fair	Preserve	B, C, D	Preservation Treatment
492	28+62	South side of W 41st	Oak	30.0	Fair	Preserve	B, C, D	Preservation Treatment
493	28+90	South side of W 41st	Oak	10.0	Fair	Preserve		No Treatment
494	28+30	South side of W 41st	Oak	15.0	Fair	Preserve		No Treatment
495	28+00	South side of W 41st	Oak	30.0	Fair	Preserve	B, C, D	Preservation Treatment
495A	13+50	North side of W 42nd	Oak	4.0	Fair	Preserve		No Treatment
496	13+50	North side of W 42nd	Crape Myrtle	24.0	Fair	Preserve		No Treatment
497	14+22	North side of W 42nd	Oak	48.0	Fair	Preserve		No Treatment
498	15+45	North side of W 42nd	Oak	30.0	Fair	Preserve		No Treatment
499	15+05	North side of W 42nd	Oak	50.0	Fair	Preserve	B, C, D	Preservation Treatment
500	16+50	North side of W 42nd	Oak	20.0	Fair	Preserve		No Treatment
501	17+50	North side of W 42nd	Pine	24.0	Fair	Preserve		No Treatment
502	17+90	North side of W 42nd	Oak	15.0	Fair	Preserve		No Treatment
503	17+60	South side of W 42nd	Oak	24.0	Fair	Preserve		No Treatment
504	17+22	South side of W 42nd	Oak	30.0	Fair	Preserve		No Treatment
505	16+90	South side of W 42nd	Crape Myrtle	12.0	Fair	Preserve		No Treatment
506	16+90	South side of W 42nd	Oak	24.0	Fair	Preserve		No Treatment
507	16+10	South side of W 42nd	Crape Myrtle	18.0	Fair	Preserve	B, C, D	Preservation Treatment
508	15+60	South side of W 42nd	Verify in Field	18.0	Fair	Preserve		No Treatment
509	15+60	South side of W 42nd	Crape Myrtle	4.0	Fair	Preserve		No Treatment
510	14+90	South side of W 42nd	Pecan	2.0	Fair	Preserve		No Treatment
511	14+60	South side of W 42nd	Magnolia	15.0	Fair	Preserve		No Treatment
512	14+20	South side of W 42nd	Oak	8.0	Fair	Preserve		No Treatment
513	13+72	South side of W 42nd	Crape Myrtle	8.0	Fair	Preserve		No Treatment

- TREE INVENTORY TREATMENT LEGEND**
(ALL WORK CONTAINED HEREIN IS INCIDENTAL TO 01662 UNLESS OTHERWISE NOTED)
- A. REMOVE TREE & STUMP GRIND, PROVIDE TOPSOIL, BACKFILL AND COMPACT TO NATURAL GRADE (TOPSOIL, INCIDENTAL)
 - B. MAINTENANCE PRUNING SEE DETAIL 2, SHEET 305
 - C. ROOT PRUNING SEE DETAIL 2, SHEET 305
 - D. TREE PROTECTION FENCING SEE DETAIL 1, SHEET 305
 - E. PROVIDE 3" MULCH OVER EXISTING TREE ROOTS WITHOUT COVERING ROOT FLARE (MIN. 5'-0" DIA. OR UP TO 6'-0" FROM BASE OF TREE)
 - F. ROOT BARRIER AT BACK OF CURB SEE DETAILS 3 & 5, SHEET 304
 - G. REMOVE EXISTING SIDEWALK BY HAND IN TREE DRUPLINE, NO BACK HOES OR OTHER MOTORIZED EQUIPMENT IS TO BE USED.
 - H. CHECKER PLATE INSTALLATION SEE DETAIL 1, SHEET 306
 - I. ZERO CURB CUT (COORDINATE WITH CIVIL ENGINEERING DRAWINGS, SEE DETAIL 4, SHEET 305)
 - J. ROOT SHAVING AS NEEDED OR DIRECTED BY ARBORIST OR COH URBAN FORESTOR. SEE SECTION 01662
 - K. RAISED CONCRETE SIDEWALK OVER EXISTING ROOTS, SEE DETAIL 2, SHEET 306
 - L. TREE BOARDING - SEE DETAIL 1, SHEET 304
 - M. TREE TRANSPLANTING (IF REQUIRED)
 - N. PIPE TRENCHING SEE DETAIL 6, SHEET 305
 - O. PIPE TUNNELING SEE DETAIL 6, SHEET 305
 - P. REDUCE SIDEWALK WIDTH TO 4'-0" AND/OR ALTER SIDEWALK ALIGNMENT WITH A "BUMP-OUT" TO ACHIEVE A MINIMUM 6'-0" FROM FACE OF EXISTING TREE TRUNK. SEE SHEET 305
 - Q. PROVIDE ADDITIONAL TREE CANOPY PRUNING FOR TREES THAT HAVE CANOPIES EXTENDING INTO THE ROADWAY WORK OR OTHERWISE CONFLICT WITH PROPOSED CONSTRUCTION ACTIVITIES. TREE CANOPY PRUNING SHALL BE DONE ON ALL SIDES TO BALANCE TREE AND NOT JUST ON THE SIDE OF THE CONSTRUCTION ACTIVITIES. WORK ON TREES OUTSIDE OF THE ROW THAT REQUIRE WORK SHALL BE COORDINATED WITH ADJACENT LAND OWNERS.
 - R. AIR SPADE ONLY (NO HAND DIGGING)



CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND
SHEPHERD PARK (CENTRAL)
DRAINAGE AND PAVING
TREE INVENTORY
SHEET 5 of 7

WBS NUMBER	M-00285-0014
DRAWING SCALE	AS SHOWN
CITY OF HOUSTON PM	JEFFREY T. HALL, P.E.
DATE	02/28/15
SHEET NO.	301 OF 365

ID #	STATION	LOCATION	SPECIES	DBH (IN)	CONDITION	STATUS	TREATMENT	MITIGATION
514	13+62	South side of W 42nd	Oak	22.0	Fair	Preserve		No Treatment
515	13+05	South side of W 42nd	Oak	18.0	Fair	Preserve		No Treatment
516	12+50	South side of W 42nd	Crape Myrtle	6.0	Fair	Preserve		No Treatment
517	28+10	East side of ALBA	Oak	12.0	Fair	Preserve		No Treatment
518	27+33	East side of ALBA	Crape Myrtle	3.9	Fair	Preserve		No Treatment
519	17+90	North side of W 42nd	Oak	50.0	Fair	Preserve		No Treatment
520	18+00	North side of W 42nd	Oak	40.0	Fair	Preserve	B, C, D	Preservation Treatment
521	18+00	North side of W 42nd	Oak	20.0	Fair	Preserve	B, C, D	Preservation Treatment
522	19+18	North side of W 42nd	Tallow	30.0	Fair	Preserve		No Treatment
523	20+25	North side of W 42nd	Oak	2.9	Fair	Preserve		No Treatment
524	20+80	North side of W 42nd	Pine	30.0	Fair	Preserve		No Treatment
525	21+05	North side of W 42nd	Crape Myrtle	24.0	Fair	Preserve		No Treatment
526	21+14	North side of W 42nd	Crape Myrtle	18.0	Fair	Preserve		No Treatment
527	21+30	North side of W 42nd	Crape Myrtle	18.0	Fair	Preserve		No Treatment
528	21+35	North side of W 42nd	Crape Myrtle	15.0	Fair	Preserve		No Treatment
529	21+42	North side of W 42nd	Oak	11.0	Fair	Preserve		No Treatment
530	21+48	North side of W 42nd	Tallow	20.0	Fair	Preserve		No Treatment
531	21+48	North side of W 42nd	Crape Myrtle	18.0	Fair	Preserve		No Treatment
532	21+52	North side of W 42nd	Crape Myrtle	18.0	Fair	Preserve		No Treatment
533	21+81	North side of W 42nd	Pine	24.0	Fair	Preserve		No Treatment
534	22+31	North side of W 42nd	Pine	36.0	Fair	Preserve	B, C, D	Preservation Treatment
535	22+37	North side of W 42nd	Sumo	18.0	Fair	Preserve		No Treatment
536	22+62	North side of W 42nd	Sumo	15.0	Fair	Preserve		No Treatment
537	23+08	North side of W 42nd	Oak	19.0	Fair	Preserve		No Treatment
538	23+62	North side of W 42nd	Crape Myrtle	15.0	Fair	Preserve		No Treatment
539	23+85	North side of W 42nd	Pine	30.0	Fair	Preserve		No Treatment
540	24+85	North side of W 42nd	Magnolia	6.9	Fair	Preserve		No Treatment
541	25+27	North side of W 42nd	Oak	24.0	Fair	Preserve		No Treatment
542	24+90	South side of W 42nd	Pine	42.0	Fair	Preserve		No Treatment
543	24+50	South side of W 42nd	Pecan	18.0	Fair	Preserve		No Treatment
544	24+21	South side of W 42nd	Pine	30.0	Fair	Preserve		No Treatment
545	23+88	South side of W 42nd	Magnolia	15.0	Fair	Preserve		No Treatment
546	23+50	South side of W 42nd	Pecan	30.0	Fair	Preserve		No Treatment
547	22+50	South side of W 42nd	Oak	10.0	Fair	Preserve		No Treatment
548	22+15	South side of W 42nd	Verly in Field	24.0	Fair	Preserve		No Treatment
549	21+85	South side of W 42nd	Verly in Field	3.9	Fair	Preserve		No Treatment
550	21+32	South side of W 42nd	Oak	24.0	Fair	Preserve		No Treatment
551	20+28	South side of W 42nd	Oak	50.0	Fair	Preserve	B, D	Preservation Treatment
552	20+65	South side of W 42nd	Cedar	24.0	Fair	Preserve	B, D	Preservation Treatment
553	19+82	South side of W 42nd	Oak	25.0	Fair	Preserve	B, C, D	Preservation Treatment
554	18+50	South side of W 42nd	Cedar	6.9	Fair	Preserve		No Treatment
555	18+15	South side of W 42nd	Oak	15.0	Fair	Preserve		No Treatment
556	18+00	South side of W 42nd	Verly in Field	15.0	Fair	Preserve		No Treatment
557	10+42	North side of LAMONTE	Oak	30.0	Fair	Preserve	B, C, D	Preservation Treatment
558	10+62	North side of LAMONTE	Oak	30.0	Fair	Preserve	B, C, D	Preservation Treatment
559	10+90	North side of LAMONTE	Oak	24.0	Fair	Preserve	B, C, D	Preservation Treatment
560	10+18	South side of LAMONTE	Cedar	15.0	Fair	Preserve	B, C, D	Preservation Treatment
561	10+41	South side of LAMONTE	Oak	30.0	Fair	Preserve	B, C, D	Preservation Treatment
562	10+58	South side of LAMONTE	Oak	12.0	Fair	Preserve		No Treatment
563	10+90	South side of LAMONTE	Oak	12.0	Fair	Preserve		No Treatment
564	11+15	South side of LAMONTE	Oak	12.0	Fair	Preserve		No Treatment
565	14+71	North side of LAMONTE	Verly in Field	15.0	Fair	Preserve		No Treatment
566	34+40	West side of ALBA	Magnolia	12.0	Fair	Preserve		No Treatment
567	16+00	North side of LAMONTE	Oak	8.0	Fair	Preserve		No Treatment

ID #	STATION	LOCATION	SPECIES	DBH (IN)	CONDITION	STATUS	TREATMENT	MITIGATION
568	16+71	North side of LAMONTE	Oak	15.0	Fair	Preserve		No Treatment
569	17+90	North side of LAMONTE	Pine	40.0	Fair	Preserve		No Treatment
570	18+50	South side of LAMONTE	Oak	20.0	Fair	Preserve	B, C, D, G	Preservation Treatment
571	19+28	South side of LAMONTE	Oak	12.0	Fair	Preserve	B, C, D	Preservation Treatment
572	19+80	South side of LAMONTE	Oak	38.0	Fair	Preserve	B, C, D	Preservation Treatment
573	21+42	South side of LAMONTE	Cedar	12.0	Fair	Remove	A	No Replacement
574	21+84	South side of LAMONTE	Oak	6.0	Fair	Preserve	B, C, D	Preservation Treatment
575	21+88	South side of LAMONTE	Oak	6.0	Fair	Preserve	B, C, D	Preservation Treatment
576	22+22	South side of LAMONTE	Oak	20.0	Fair	Preserve	B, C, D	Preservation Treatment
577	22+80	South side of LAMONTE	Oak	8.0	Fair	Preserve		No Treatment
578	22+82	South side of LAMONTE	Oak	18.0	Fair	Preserve	B, C, D, G	Preservation Treatment
579	23+00	South side of LAMONTE	Pine	36.0	Fair	Preserve		No Treatment
580	23+75	South side of LAMONTE	Oak	12.0	Fair	Remove	A	Replace with 4" x 4" x 8"
581	24+15	South side of LAMONTE	Crape Myrtle	12.0	Fair	Remove	A	No Replacement
582	24+22	South side of LAMONTE	Crape Myrtle	12.0	Fair	Remove	A	No Replacement
583	24+44	South side of LAMONTE	Crape Myrtle	12.0	Fair	Remove	A	No Replacement
584	24+50	South side of LAMONTE	Pine	36.0	Fair	Preserve	B, C, D	Preservation Treatment
585	24+70	South side of LAMONTE	Crape Myrtle	12.0	Fair	Remove	A	No Replacement
586	24+95	South side of LAMONTE	Crape Myrtle	12.0	Fair	Remove	A	No Replacement
587	25+10	South side of LAMONTE	Crape Myrtle	12.0	Fair	Remove	A	No Replacement
588	26+33	South side of LAMONTE	Oak	3.0	Fair	Preserve		No Treatment
589	26+00	South side of LAMONTE	Tree Cluster	18.0	Fair	Preserve		No Treatment
590	27+10	South side of LAMONTE	Oak	18.0	Fair	Preserve		No Treatment
591	27+71	South side of LAMONTE	Oak	24.0	Fair	Preserve		No Treatment
592	27+31	North side of LAMONTE	Oak	80.0	Fair	Preserve		No Treatment
593	29+85	North side of LAMONTE	Pine	24.0	Fair	Preserve		No Treatment
594	25+80	North side of LAMONTE	Pine	20.0	Fair	Preserve		No Treatment
595	24+51	North side of LAMONTE	Verly in Field	15.0	Fair	Preserve		No Treatment
596	24+45	North side of LAMONTE	Pine	30.0	Fair	Preserve		No Treatment
597	23+92	North side of LAMONTE	Pine	24.0	Fair	Preserve		No Treatment
598	23+25	North side of LAMONTE	Magnolia	18.0	Fair	Preserve		No Treatment
599	23+00	North side of LAMONTE	Pine	24.0	Fair	Preserve		No Treatment
600	21+25	North side of LAMONTE	Tree Cluster	18.0	Fair	Preserve		No Treatment
601	19+10	North side of LAMONTE	Oak	50.0	Fair	Preserve		No Treatment
602	19+90	North side of AZALEA	Oak	20.0	Fair	Preserve		No Treatment
603	11+72	North side of AZALEA	Oak	30.0	Fair	Preserve	B, C, D, G	Preservation Treatment
604	12+25	North side of AZALEA	Oak	24.0	Fair	Preserve	B, C, D, G	Preservation Treatment
605	13+25	North side of AZALEA	Oak	20.0	Fair	Preserve	B, C, D, G	Preservation Treatment
606	13+62	North side of AZALEA	Magnolia	24.0	Fair	Preserve	B, C, D, G	Preservation Treatment
607	16+00	North side of AZALEA	Oak	36.0	Fair	Preserve	B, C, D	Preservation Treatment
608	16+33	North side of AZALEA	Pine	40.0	Fair	Preserve	B, C, D	Preservation Treatment
609	16+50	North side of AZALEA	Tallow	18.0	Fair	Preserve		No Treatment
610	18+00	North side of AZALEA	Pine	30.0	Fair	Preserve		No Treatment
611	18+05	South side of AZALEA	Pine	48.0	Fair	Preserve		No Treatment
612	17+80	South side of AZALEA	Tallow	15.0	Fair	Preserve		No Treatment
613	16+90	South side of AZALEA	Oak	12.0	Fair	Preserve		No Treatment
614	16+88	South side of AZALEA	Palm	12.0	Fair	Preserve		No Treatment
615	15+44	South side of AZALEA	Oak	24.0	Fair	Preserve	B, C, D	Preservation Treatment
616	15+90	South side of AZALEA	Pecan	12.0	Fair	Preserve		No Treatment
617	15+82	South side of AZALEA	Pine	40.0	Fair	Preserve	B, C, D	Preservation Treatment
618	15+45	South side of AZALEA	Oak	36.0	Fair	Preserve	B, C, D	Preservation Treatment
619	14+85	South side of AZALEA	Oak	48.0	Fair	Preserve	B, C, D	Preservation Treatment
620	13+00	South side of AZALEA	Oak	30.0	Fair	Preserve	B, C, D, G	Preservation Treatment
621	11+82	South side of AZALEA	Oak	30.0	Fair	Preserve		No Treatment

- TREE INVENTORY TREATMENT LEGEND**
(ALL WORK CONTAINED HEREIN IS INCIDENTAL TO 01602 UNLESS OTHERWISE NOTED)
- A. REMOVE TREE & STUMP GRIND, PROVIDE TOPSOIL, BACKFILL AND COMPACT TO NATURAL GRADE (TOPSOIL, INCIDENTAL)
 - B. MAINTENANCE PRUNING SEE DETAIL 2, SHEET 305
 - C. ROOT PRUNING: SEE DETAIL, SEE DETAIL 2, SHEET 305
 - D. TREE PROTECTION FENCING: SEE DETAIL 1, SHEET 305
 - E. PROVIDE 3" MULCH OVER EXISTING TREE ROOTS WITHOUT COVERING ROOT FLARE (MIN. 5'-0" DIA. OR UP TO 6'-0" FROM BASE OF TREE) ROOT BARRIER AT BACK OF CURB. SEE DETAILS 3 & 5, SHEET 304
 - F. REMOVE EXISTING SIDEWALK BY HAND IN TREE DRUPLINE, NO BACK HOES OR OTHER MOTORIZED EQUIPMENT IS TO BE USED.
 - G. CHECKER PLATE INSTALLATION SEE DETAIL 1, SHEET 306
 - H. ZERO CURB CUT (COORDINATE WITH CIVIL ENGINEERING DRAWINGS, SEE DETAIL 4, SHEET 305)
 - J. ROOT SHAVING AS NEEDED OR DIRECTED BY ARBORIST OR COH URBAN FORESTOR. SEE SECTION 01602
 - K. RAISED CONCRETE SIDEWALK OVER EXISTING ROOTS. SEE DETAIL 2, SHEET 306
 - L. TREE BOARDING: SEE DETAIL 1, SHEET 304
 - M. TREE TRANSPLANTING (IF REQUIRED)
 - N. PIPE TRENCHING SEE DETAIL 6, SHEET 305
 - O. PIPE TUNNELING SEE DETAIL 5, SHEET 305
 - P. REDUCE SIDEWALK WIDTH TO 4'-0" AND/OR ALTER SIDEWALK ALIGNMENT WITH A "BUMP-OUT" TO ACHIEVE A MINIMUM 6'-0" FROM FACE OF EXISTING TREE TRUNK. 3, SHEET 305
 - Q. PROVIDE ADDITIONAL TREE CANOPY PRUNING FOR TREES THAT HAVE CANOPIES EXTENDING INTO THE ROADWAY WORK OR OTHERWISE CONFLICT WITH PROPOSED CONSTRUCTION ACTIVITIES. TREE CANOPY PRUNING SHALL BE DONE ON ALL SIDES TO BALANCE TREE AND NOT JUST ON THE SIDE OF THE CONSTRUCTION ACTIVITIES. WORK ON TREES OUTSIDE OF THE ROW THAT REQUIRE WORK SHALL BE COORDINATED WITH ADJACENT LAND OWNERS.
 - R. AIR SPADE ONLY (NO HAND DIGGING)




1988 REG
NO. 4-270
3101 BRANFLORE, SUITE 200
HOUSTON, TEXAS 77054
Phone: (713) 525-1444
Fax: (713) 526-8333



ASSOCIATES, INC.
REG. NO. 001,671,918
Houston, Texas 77058
P.O. BOX 2881
HOUSTON, TEXAS 77258
1-800-828-8888
www.m2l.com

CERTIFIED ARBORIST,
STATE OF TEXAS
MAGNOLIA #1198
MAGNOLIA #1198
MAGNOLIA #1198

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND
SHEPHERD PARK (CENTRAL)
DRAINAGE AND PAVING

TREE INVENTORY
SHEET 6 of 7

WSS NUMBER	M-020385-007-4
DRAWING SCALE	
CITY OF HOUSTON PM	
JEFFREY T. HALL, P.E.	
DATE	
SHEET NO.	5630
02/28/15	302 OF 385

ID #	STATION	LOCATION	SPECIES	DIA (IN)	CONDITION	STATUS	TREATMENT	MITIGATION
622	11-50	South side of AZALEA	Pine	36.0	Fair	Preserve	B, C, D, G	Preservation Treatment
623	11-48	South side of AZALEA	Oak	50.0	Fair	Preserve	B, C, D, G	Preservation Treatment
624	11-05	North side of SUE BARNETT	Magnolia	15.0	Fair	Preserve		No Treatment
625	11-50	North side of SUE BARNETT	Oak	18.0	Fair	Preserve		No Treatment
626	11-95	North side of SUE BARNETT	Oak	18.0	Fair	Preserve		No Treatment
627	12-23	North side of SUE BARNETT	Oak	8.6	Fair	Preserve		No Treatment
628	12-37	North side of SUE BARNETT	Oak	9.0	Fair	Preserve		No Treatment
629	12-02	North side of SUE BARNETT	Oak	4.0	Fair	Preserve		No Treatment
630	13-70	North side of SUE BARNETT	Oak	12.0	Fair	Preserve		No Treatment
631	13-95	North side of SUE BARNETT	Crape Myrtle	12.0	Fair	Remove	A	No Replacement
632	14-00	North side of SUE BARNETT	Oak	12.0	Fair	Preserve	B, C, D	Preservation Treatment
633	14-15	North side of SUE BARNETT	Crape Myrtle	9.0	Fair	Remove	A	No Replacement
634	14-22	North side of SUE BARNETT	Crape Myrtle	12.0	Fair	Remove	A	No Replacement
635	14-50	North side of SUE BARNETT	Oak	10.0	Fair	Preserve		No Treatment
636	10-31	South side of SUE BARNETT	Oak	18.0	Fair	Preserve		No Treatment
637	10-67	South side of SUE BARNETT	Oak	18.0	Fair	Preserve		No Treatment
638	11-00	South side of SUE BARNETT	Oak	24.0	Fair	Preserve		No Treatment
639	11-10	South side of SUE BARNETT	Oak	30.0	Fair	Preserve		No Treatment
640	11-60	South side of SUE BARNETT	Palm	10.0	Fair	Preserve		No Treatment
641	11-90	South side of SUE BARNETT	Oak	18.0	Fair	Preserve	B, C, D	Preservation Treatment
642	12-20	South side of SUE BARNETT	Oak	18.0	Fair	Preserve	B, C, D	Preservation Treatment
643	13-38	South side of SUE BARNETT	Oak	18.0	Fair	Preserve		No Treatment
644	13-51	South side of SUE BARNETT	Oak	18.0	Fair	Preserve		No Treatment
645	13-90	South side of SUE BARNETT	Verify in Field	4.0	Fair	Preserve		No Treatment
646	14-87	South side of SUE BARNETT	Oak	6.0	Fair	Preserve		No Treatment
647	15-50	North side of SUE BARNETT	Oak	18.0	Fair	Preserve	B, C, D, G	Preservation Treatment
648	16-70	South side of SUE BARNETT	Pine	8.6	Fair	Preserve		No Treatment
649	17-00	South side of SUE BARNETT	Oak	18.0	Fair	Preserve		No Treatment
650	18-20	South side of SUE BARNETT	Oak	18.0	Fair	Preserve	B, C, D	Preservation Treatment
651	17-56	South side of SUE BARNETT	Oak	12.0	Fair	Preserve		No Treatment
652	17-70	South side of SUE BARNETT	Oak	18.0	Fair	Preserve		Preservation Treatment
653	19-44	South side of SUE BARNETT	Oak	24.0	Fair	Preserve		No Treatment
654	20-00	South side of SUE BARNETT	Oak	24.0	Fair	Preserve		No Treatment
655	20-87	South side of SUE BARNETT	Pecan	12.0	Fair	Preserve		No Treatment
656	20-87	North side of SUE BARNETT	Crape Myrtle	15.0	Fair	Preserve		No Treatment
657	20-50	North side of SUE BARNETT	Magnolia	9.0	Fair	Preserve		No Treatment
658	20-00	North side of SUE BARNETT	Oak	12.0	Fair	Preserve	A	Replace Inch For Inch
659	19-40	North side of SUE BARNETT	Oak	12.0	Fair	Preserve		No Treatment
660	19-35	North side of SUE BARNETT	Oak	20.0	Fair	Preserve	B, C, D, G, P, Q	Preservation Treatment
661	18-58	North side of SUE BARNETT	Oak	30.0	Fair	Preserve	B, C, D, G	Preservation Treatment
662	17-50	North side of SUE BARNETT	Oak	12.0	Fair	Preserve		No Treatment
663	10-60	South side of CHAMBOARD	Pine	24.0	Fair	Preserve	B, C, D, G	Preservation Treatment
664	10-80	South side of CHAMBOARD	Pine	24.0	Fair	Preserve	B, C, D, G	Preservation Treatment
665	10-44	West side of DUNSMIRE	Oak	40.0	Fair	Preserve	B, C, D, G, H, I, J, K, L, P	Preservation Treatment
666	10-44	East side of DUNSMIRE	Verify in Field	30.0	Fair	Preserve	B, C, D, G, H, I, J, K, L, P	Preservation Treatment
668A	10-54	East side of DUNSMIRE	Oak	30.0	Fair	Preserve	B, C, D, G, H, I, J, K, L, P	Preservation Treatment
668B	11-80	East side of DUNSMIRE	Oak	30.0	Fair	Preserve	B, C, D, G, H, I, L	Preservation Treatment
667	11-80	North side of THORNTON	Pine	24.0	Fair	Remove	A	No Replacement
667A	12-10	North side of THORNTON	Pine	24.0	Fair	Preserve	B, C, D, P, Q	Preservation Treatment
668	11-80	South side of THORNTON	Pine	12.0	Fair	Preserve	B, C, D, G, L, P, Q	Preservation Treatment
669	11-83	South side of THORNTON	Pine	12.0	Fair	Remove	A	Replace Inch For Inch
670	11-90	South side of THORNTON	Orange	6.6	Fair	Preserve		No Treatment
671	13-44	North side of THORNTON	Oak	18.0	Fair	Remove	A	Replace Inch For Inch
672	10-85	North side of WOODCREST	Oak	30.0	Fair	Remove	A	Replace Inch For Inch

ID #	STATION	LOCATION	SPECIES	DIA (IN)	CONDITION	STATUS	TREATMENT	MITIGATION
673	11-00	North side of WOODCREST	Oak	40.0	Poor	Remove	A	No Replacement
674	11-22	South side of WOODCREST	Tree Cluster	12.0	Fair	Remove	A	No Replacement
675	11-17	South side of WOODCREST	Tree Cluster	12.0	Fair	Remove	A	No Replacement
676	11-00	South side of WOODCREST	Tree Cluster	15.0	Fair	Remove	B, C, D, L	No Replacement
677	10-42	North side of OAK	Cedar	30.0	Fair	Preserve	B, C, D	Preservation Treatment
678	12-84	North side of CANDELIGHT	Tree Cluster	15.0	Fair	Preserve	B, C, D	Preservation Treatment
679	12-84	North side of CANDELIGHT	Tree Cluster	15.0	Fair	Remove	A	No Replacement
680	11-05	North side of JANISCH	Oak	20.0	Fair	Preserve		No Treatment
681	10-90	South side of JANISCH	Magnolia	24.0	Fair	Preserve	B, C, D	Preservation Treatment
682	10-82	South side of JANISCH	Oak	24.0	Fair	Preserve	B, C, D	Preservation Treatment
683	10-90	South side of JANISCH	Oak	24.0	Fair	Preserve	B, C, D	Preservation Treatment
684	11-00	South side of JANISCH	Oak	20.0	Fair	Preserve	B, C, D	Preservation Treatment
685	11-02	South side of JANISCH	Oak	20.0	Fair	Preserve	B, C, D	Preservation Treatment
686	11-30	South side of JANISCH	Oak	30.0	Fair	Preserve	B, C, D	Preservation Treatment
687	12-90	North side of LEHMAN	Verify in Field	18.0	Fair	Preserve	B, D	Preservation Treatment
687A	12-00	East side of BERKMAN	Hickory	14.0	Fair	Preserve	B, C, D	Preservation Treatment
688	13-00	North side of LEHMAN	Oak	24.0	Fair	Preserve	B, D	Preservation Treatment
689	13-00	North side of LEHMAN	Oak	24.0	Fair	Preserve	B, N	Preservation Treatment
690	13-72	North side of LEHMAN	Oak	24.0	Fair	Preserve	B, N	Preservation Treatment
691	11-30	West side of SUE MARIE	Hickory	15.0	Poor	Remove	A	No Replacement
691A	11-30	West side of SUE MARIE	Elm	15.0	Fair	Preserve	B, D	Preservation Treatment
691C	12-90	West side of SUE MARIE	Oak	36.0	Good	Preserve	B, D	Preservation Treatment
691D	13-22	West side of SUE MARIE	Pine	30.0	Good	Preserve	B, D, L	Preservation Treatment
699	13-78	West side of SUE MARIE	Pine	18.0	Good	Preserve	B, D, L	Preservation Treatment
700	13-90	West side of SUE MARIE	Pine	15.0	Good	Preserve	B, D, L	Preservation Treatment
701	14-82	West side of SUE MARIE	Pine	15.0	Fair	Preserve		Preservation Treatment
702	14-82	West side of SUE MARIE	Magnolia	6.0	Good	Preserve	B, D	Preservation Treatment
703	14-85	West side of SUE MARIE	Pine	15.0	Good	Preserve		Preservation Treatment
704	14-26	West side of SUE MARIE	Pine	15.0	Good	Preserve		Preservation Treatment
705	15-00	West side of SUE MARIE	Pine	15.0	Good	Preserve		Preservation Treatment
706	15-10	West side of SUE MARIE	Pine	24.0	Good	Preserve		Preservation Treatment
707	15-30	West side of SUE MARIE	Crape Myrtle	15.0	Good	Preserve	B	Preservation Treatment
708	14-90	West side of SUE MARIE	Pine	15.0	Good	Preserve	B, D, L	Preservation Treatment
709	15-00	West side of SUE MARIE	Magnolia	6.0	Good	Preserve	B, D	Preservation Treatment
710	15-18	West side of SUE MARIE	Pine	24.0	Good	Preserve		Preservation Treatment
711	11-15	East side of SUE MARIE	Pine	18.0	Fair	Preserve		No Treatment
712	12-10	East side of SUE MARIE	Elm	12.0	Fair	Preserve		No Treatment
713	12-25	East side of SUE MARIE	Oak	12.0	Fair	Preserve	B, D	Preservation Treatment
714	12-50	East side of SUE MARIE	Pine	12.0	Fair	Remove	A	No Replacement
715	12-90	East side of SUE MARIE	Oak	15.0	Fair	Remove	B, D	Preservation Treatment
716	13-15	East side of SUE MARIE	Oak	40.0	Fair	Preserve		No Treatment
717	14-50	East side of SUE MARIE	Cedar	15.0	Fair	Remove	A	No Replacement
718	14-88	East side of SUE MARIE	Pine	18.0	Fair	Preserve		No Treatment
719	14-95	East side of SUE MARIE	Cedar	18.0	Fair	Remove	A	No Replacement
720	15-15	East side of SUE MARIE	Magnolia	18.0	Fair	Preserve		No Treatment
721	14-70	East side of SUE MARIE	Cedar	15.0	Fair	Remove	A	No Replacement
722	10-22	East side of SUE MARIE	Cedar	15.0	Fair	Remove	A	No Replacement

CITY OF HOUSTON PROTECTED TREE SUMMARY	
# of Trees Inventoried (Excludes hatched areas in inventory tables)	748
# of Trees Greater than 20" caliper	262
# of Trees Greater than 1.5" caliper and on COH's Street Tree List	483

- TREE INVENTORY TREATMENT LEGEND**
(ALL WORK CONTAINED HEREIN IS INCIDENTAL TO D1562 UNLESS OTHERWISE NOTED)
- A. REMOVE TREE & STUMP GRIND, PROVIDE TOPSOIL BACKFILL AND COMPACT TO NATURAL GRADE (TOPSOIL INCIDENTAL)
 - B. MAINTENANCE PRUNING SEE DETAIL 2, SHEET 305
 - C. ROOT PRUNING, SEE DETAIL 2, SHEET 305
 - D. TREE PROTECTION FENCING, SEE DETAIL 1, SHEET 305
 - E. PROVIDE 3" MULCH OVER EXISTING TREE ROOTS WITHOUT COVERING ROOT FLARE (MIN 5'-0" DIA. OR UP TO 6'-0" FROM BASE OF TREE)
 - F. ROOT BARRIER AT BACK OF CURB, SEE DETAILS 3 & 5, SHEET 304
 - G. REMOVE EXISTING SIDEWALK BY HAND IN TREE DRIFLINE, NO BACK HOES OR OTHER MOTORIZED EQUIPMENT IS TO BE USED.
 - H. CHECKER PLATE INSTALLATION SEE DETAIL 1, SHEET 305
 - I. ZERO CURB CUT, COORDINATE WITH CIVIL ENGINEERING DRAWINGS, SEE DETAIL 4, SHEET 305
 - J. ROOT SHAVING AS NEEDED OR DIRECTED BY ARBORIST OR COH URBAN FORESTOR. SEE SECTION 0162
 - K. RAISED CONCRETE SIDEWALK OVER EXISTING ROOTS, SEE DETAIL 2, SHEET 306
 - L. TREE BOARDING, SEE DETAIL 1, SHEET 304
 - M. TREE TRANSPANTING (IF REQUIRED)
 - N. PIPE TRENCHING SEE DETAIL 6, SHEET 305
 - O. PIPE TUNNELING SEE DETAIL 5, SHEET 305
 - P. REDUCE SIDEWALK WIDTH TO 4'-0" AND/OR ALTER SIDEWALK ALIGNMENT WITH A "BUMP-OUT" TO ACHIEVE A MINIMUM 6'-0" FROM FACE OF EXISTING TREE TRUNK, SEE SHEET 305
 - Q. PROVIDE ADDITIONAL TREE CANOPY PRUNING FOR TREES THAT HAVE CANOPIES EXTENDING INTO THE ROADWAY WORK OR OTHERWISE CONFLICT WITH PROPOSED CONSTRUCTION ACTIVITIES. TREE CANOPY PRUNING SHALL BE DONE ON ALL SIDES TO BALANCE TREE AND NOT JUST ON THE SIDE OF THE CONSTRUCTION ACTIVITIES WORK ON TREES OUTSIDE OF THE ROW THAT REQUIRE WORK SHALL BE COORDINATED WITH ADJACENT LAND OWNERS.
 - R. AIR SPADE ONLY (NO HAND DIGGING)



M2L
ASSOCIATES P.C.
10000 Katy Road, Suite 200
Houston, Texas 77054
Phone (713) 632-1044
Fax (713) 632-1045

REGISTERED PROFESSIONAL ENGINEER
No. 10887
1988

CERTIFIED ANCHOR, STATE OF TEXAS
LAWRENCE T. HALL
1988-2018

SUPERVISED BY LAWRENCE T. HALL, P.E.
1988-2008

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

TREE INVENTORY
SHEET 7 of 7

WBS NUMBER
M20209-001-14

DRAWING SCALE

CITY OF HOUSTON PM
JEFFREY T. HALL, P.E.

DATE SHEET NO.
02/28/15 303 OF 385

55630

ID #	STATION	LOCATION	SPECIES	REQ. REPLACE
014	12-11	North side of WAKEFIELD	Verify in Field	0.0
022	11-00	South side of WAKEFIELD	Tree Cluster	0.0
033	12-21	South side of WAKEFIELD	Pecan	0.0
023A	13-48	South side of WAKEFIELD	Verify in Field	0.0
023B	13-74	South side of WAKEFIELD	Verify in Field	0.0
023C	14-92	South side of WAKEFIELD	Pecan	0.0
027	15-22	East side of ALBA	Oak	0.0
028	15-33	East side of ALBA	Tree Cluster	0.0
030	15-40	East side of ALBA	Tree Cluster	0.0
037	12-38	North side of FISHER	Oak	0.0
045	13-35	North side of FISHER	Crape Myrtle	0.0
046	13-92	North side of FISHER	Crape Myrtle	0.0
047	14-17	North side of FISHER	Stump	0.0
048	15-50	North side of FISHER	Oak	0.0
049	15-67	North side of FISHER	Oak	0.0
052	16-48	North side of FISHER	Oak	10.0
057	19-51	North side of FISHER	Oak	6.0
066	15-22	South side of FISHER	Oak	10.0
067	15-44	South side of FISHER	Oak	6.0
075A	10-35	North side of CHAMBOARD	Crape Myrtle	0.0
083B	19-85	North side of FISHER	Oak	15.0
083C	19-33	North side of FISHER	Oak	15.0
083D	19-72	North side of FISHER	Tree Cluster	15.0
084	20-44	North side of FISHER	Tree Cluster	0.0
087	23-85	North side of FISHER	Pecan	0.0
099	21-77	South side of FISHER	Oak	0.0
102	22-40	South side of FISHER	Crape Myrtle	0.0
103	22-88	South side of FISHER	Palm	0.0
121	23-50	East side of ALBA	Tree Cluster	0.0
123	23-70	East side of ALBA	Tree Cluster	0.0
172	25-25	West side of ALBA	Oak	24.0
174	26-25	West side of ALBA	Crape Myrtle	0.0
236	41-51	West side of ALBA	Oak	20.0
261	40-87	East side of ALBA	Crape Myrtle	0.0
262	40-93	East side of ALBA	Crape Myrtle	0.0
263	41-02	East side of ALBA	Crape Myrtle	0.0
264	41-06	East side of ALBA	Oak	15.0
265	41-09	East side of ALBA	Crape Myrtle	0.0
266	41-16	East side of ALBA	Crape Myrtle	0.0
267	41-21	East side of ALBA	Crape Myrtle	0.0
270	41-84	East side of ALBA	Oak	18.0
278	44-92	East side of ALBA	Tree Cluster	0.0

ID #	STATION	LOCATION	SPECIES	REQ. REPLACE
281	47-02	East side of ALBA	Magnolia	0.0
283	12-22	South side of CHAMBOARD	Crape Myrtle	0.0
285A	12-50	South side of CHAMBOARD	Crape Myrtle	0.0
285B	13-00	South side of CHAMBOARD	Crape Myrtle	0.0
286	12-48	South side of CHAMBOARD	Crape Myrtle	0.0
287	12-58	South side of CHAMBOARD	Crape Myrtle	0.0
288	12-98	South side of CHAMBOARD	Crape Myrtle	0.0
289	13-15	South side of CHAMBOARD	Crape Myrtle	0.0
302	21-00	South side of CHAMBOARD	Crape Myrtle	0.0
325	21-05	North side of CHAMBOARD	Oak	24.0
328	13-02	West side of BRINKMAN	Pine	0.0
329	14-48	West side of BRINKMAN	Oak	0.0
330	16-22	West side of BRINKMAN	Pine	48.0
331	16-20	West side of BRINKMAN	Verify in Field	0.0
332	18-51	West side of BRINKMAN	Pine	0.0
333	18-93	West side of BRINKMAN	Pecan	0.0
334	20-05	West side of BRINKMAN	Verify in Field	0.0
335	20-18	West side of BRINKMAN	Verify in Field	0.0
336	20-22	West side of BRINKMAN	Pecan	0.0
338	20-52	West side of BRINKMAN	Verify in Field	0.0
339	21-10	West side of BRINKMAN	Verify in Field	0.0
341	21-44	West side of BRINKMAN	Oak	12.0
342	22-52	West side of BRINKMAN	Pine	30.0
346	23-77	West side of BRINKMAN	Pine	30.0
348	24-05	West side of BRINKMAN	Pine	18.0
350	24-15	West side of BRINKMAN	Pine	0.0
352	12-11	East side of BRINKMAN	Cedar	30.0
353	23-50	West side of BRINKMAN	Cedar	0.0
354	27-00	East side of BRINKMAN	Stump	0.0
356	29-00	East side of BRINKMAN	Verify in Field	0.0
358	29-54	East side of BRINKMAN	Verify in Field	0.0
360	30-45	East side of BRINKMAN	Hackberry	24.0
361	30-50	East side of BRINKMAN	Verify in Field	0.0
362	30-62	East side of BRINKMAN	Dead	0.0
363	30-07	East side of BRINKMAN	Dead	0.0
364	30-72	East side of BRINKMAN	Tree Cluster	0.0
365	31-28	East side of BRINKMAN	Oak	30.0
366	31-30	East side of BRINKMAN	Oak	24.0
367	31-44	East side of BRINKMAN	Stump	0.0
368	31-52	East side of BRINKMAN	Oak	0.0
369	31-00	East side of BRINKMAN	Verify in Field	0.0
370	32-20	East side of BRINKMAN	Oak	0.0

ID #	STATION	LOCATION	SPECIES	REQ. REPLACE
376	37-04	East side of BRINKMAN	Verify in Field	0.0
377	37-00	East side of BRINKMAN	Crape Myrtle	0.0
379	38-48	East side of BRINKMAN	Oak	0.0
429	13-85	West side of ALBA	Oak	24.0
430	13-93	West side of ALBA	Oak	24.0
431	14-26	West side of ALBA	Crape Myrtle	0.0
433	15-00	East side of ALBA	Oak	0.0
446	14-70	South side of W. 41st	Crape Myrtle	0.0
447	14-90	South side of W. 41st	Crape Myrtle	0.0
450	15-28	North side of W. 41st	Oak	18.0
451	15-01	North side of W. 41st	Oak	18.0
573	21-42	South side of LAMONTE	Cedar	0.0
561	24-15	South side of LAMONTE	Crape Myrtle	0.0
562	24-22	South side of LAMONTE	Crape Myrtle	0.0
563	24-44	South side of LAMONTE	Crape Myrtle	0.0
565	24-70	South side of LAMONTE	Crape Myrtle	0.0
566	24-96	South side of LAMONTE	Crape Myrtle	0.0
567	25-10	South side of LAMONTE	Crape Myrtle	0.0
631	13-98	North side of SUE BARNETT	Crape Myrtle	0.0
633	14-15	North side of SUE BARNETT	Crape Myrtle	0.0
634	14-22	North side of SUE BARNETT	Crape Myrtle	0.0
658	20-00	North side of SUE BARNETT	Oak	12.0
667	11-00	North side of THORNTON	Pine	0.0
669	11-83	South side of THORNTON	Pine	12.0
671	13-44	North side of THORNTON	Oak	18.0
672	10-85	North side of WOODCREST	Oak	30.0
673	11-00	North side of WOODCREST	Oak	0.0
674	11-22	South side of WOODCREST	Tree Cluster	0.0
675	11-17	South side of WOODCREST	Tree Cluster	0.0
679	12-54	North side of CANDELIGHT	Tree Cluster	0.0
690	11-30	West side of SUE MARIE	Hackberry	0.0
714	12-50	East side of SUE MARIE	Pear	0.0
717	14-50	East side of SUE MARIE	Cedar	0.0
719	14-98	East side of SUE MARIE	Cedar	0.0
721	14-70	East side of SUE MARIE	Cedar	0.0
722	15-22	East side of SUE MARIE	Cedar	0.0

TREE REMOVAL SUMMARY	
TOTAL TREE REPLACEMENT INCHES REQUIRED	580
TOTAL QUANTITY OF 4" CAL. TREES REQUIRED	145
TOTAL QUANTITY OF 4" CAL. TREES PLANTED	160

*SEE PLANT LIST ON SHEET 306 FOR SPECIFIC TYPES, SIZES & QUANTITIES

NOTE: TREE REPLACEMENT LOCATIONS SHOWN ON PLANS MUST BE COORDINATED WITH ADJACENT PROPERTY OWNER AND CITY OF HOUSTON URBAN FORESTRY PRIOR TO EXCAVATION FOR PLANTING. COORDINATION SHALL BE COMPLETED BY CONSTRUCTION CONTRACTOR'S CERTIFIED ARBORIST. TREES TO BE MAINTAINED AND WATERED FOR 2 YEARS FOLLOWING PLANTING PER STANDARD SPEC 02915. TIMING OF PLANTING MAY BE DELAYED IN PERIODS OF DROUGHT WITH MANDATORY WATER RESTRICTIONS IN PLACE. TIMING TO BE COORDINATED WITH CITY OF HOUSTON URBAN FORESTRY. TREES IN ESPLANADE GROUPINGS TO BE PLANTED IN COMMON BED WITH 4" OF HARDWOOD MULCH BETWEEN TREES.



TRISTYNE REIS
REG. # 27016
1518 BROADWAY, SUITE 200
HOUSTON, TEXAS 77002
PHONE (713) 522-5444
FAX (713) 504-8332



ASSOCIATES INC.
REG. REG. # 10718-00
12000 WEST 171 STREET, SUITE 100
HOUSTON, TEXAS 77058
PHONE (281) 486-1100
FAX (281) 486-1101
www.m2l.com
MAY 01, 2016

SUPPLIED BY: LAMITECH
FIRM # 4000

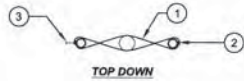
CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING TREE REMOVAL AND MITIGATION SUMMARY

WBS NUMBER	M-002195-0001-4
DRAWING SCALE	AS SHOWN
CITY OF HOUSTON PM	JEFFREY T. HALL, P.E.
DATE	02/29/16
SHEET NO.	303.AOV 305

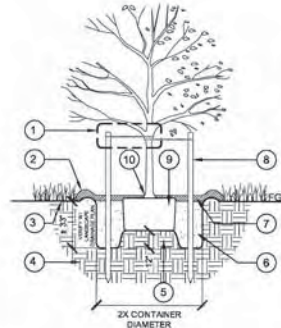
55630

NOT TO SCALE



DETAIL NOTES:
SPECIFIED ARBORTIE GREEN STAKING AND GUYING MATERIAL IS TO BE FLAT WOVEN POLYPROPYLENE MATERIAL. 3/4" WIDE SOULS. BREAK STRENGTH 114. ARBORTIE SHALL BE FASTENED TO STAKES IN A MANNER WHICH PERMITS TREE MOVEMENT AND SUPPORTS THE TREE.

- DETAIL NOTES:**
- 3/4" WIDE GREEN, FLAT WOVEN POLYPROPYLENE ARBORTIE
 - FOLD ENDS OF ARBORTIE BACK. SECURE TO STAKE WITH 1" GALVANIZED ROOFING NAIL OR USE A KNOT.
 - ARBORTIE NAILED TO LODGE POLE



- DETAIL NOTES:**
- TREE TIE DETAIL. SEE DETAIL #6, THIS SHEET.
 - FORM RESERVOIR OF MULCH (1" MIN./8" MAX.) HEIGHT
 - FINISH GRADE
 - UNDISTURBED SUBGRADE (TYPICAL).
 - PROVIDE 1'-0" TALL X 3'-0" DIA. COMPACTED SOIL LEDGE FOR ROOT BALL (SCARIFY BOTTOM AND SIDES OF TREE PIT).
 - PLANTING MIXTURE, SEE SPECIFICATIONS.
 - 4" (MIN.) MULCH TOP DRESSING
 - STEEL 1" POST (2 MIN. PER TREE STANDARD) PLACED A MINIMUM OF 2" FROM ROOTBALL
 - ROOT BALL, SCARIFY AND LOOSEN ROOTS. SET TOP OF BALL/CONTAINER ± 2" ABOVE FINISHED GRADE.
 - SET TOP OF ROOT FLARE ± 3" ABOVE FINISHED GRADE

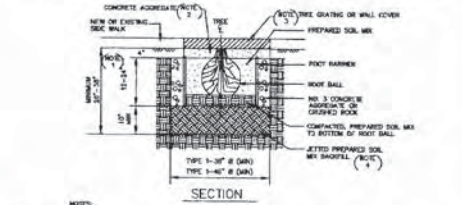
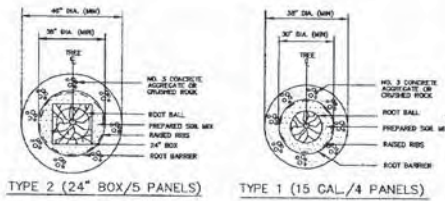
PROPOSED PLANTING: CONTRACTOR SHALL MARK TREE LOCATION PRIOR TO PLANTING FOR APPROVAL BY CITY FORESTER AND CITY ENGINEER

SYM.	ABR.	BOTANICAL NAME	COMMON NAME	CONTAINER SIZE	NOTES	QNTY.
○	QV	QUERCUS VIRGINIANA	LIVE OAK	100 GAL. SINGLE TRUNK	4" CAL. MIN. @ ±30' 0" O.C.	130
⊗	UC	ULMUS CRASSIFOLIA	CEDAR ELM	100 GAL. SINGLE TRUNK	4" CAL. MIN. @ ±30' 0" O.C.	30
⊙	LI	LAGERSTROEMIA INDICA	CREPE MYRTLE	65 GAL. MULTI TRUNK	3" CAL. MIN. @ ±20' 0" O.C.	6"

* NOT INCLUDED IN THE TREE REPLACEMENT REQUIREMENT CALCULATIONS

6 TREE STAKING

NOT TO SCALE



- NOTES:**
- ROOT BARRIER SIZES 12"-24" SHALL BE USED DEPENDS ON THE SIZE OF THE TREE. CONCRETE AGGREGATE SHALL BE USED AT SLOPES AND RETAINING WALLS WHEN ADDITIONAL STRENGTH IS REQUIRED.
 - CONCRETE AGGREGATE ONLY BE USED TO MAKE THE ELEVATION OF THE WELL COVER/TREE GRATING TO MATCH THE SIDE WALK. IF TREE WELL COVER IS NOT REQUIRED, THE GRADE SURFACE OF THE TREE WELL SHALL BE 1" LOWER THAN THE TOP WALK.
 - REFER PROJECT PLAN AND CITY OF HOUSTON STANDARDS FOR TREE GRADING/WELL COVER REQUIREMENTS.
 - PREPARED SOIL MIX SHALL BE PLACED IN PLANTING HOLE AND TAMPED TO BOTTOM OF ROOT BALL. CLEANSE PRIOR TO PROCEEDING WITH TREE PLANTING. FOR PLANTING AND TREE MAINTENANCE, REFER STANDARD LANDSCAPE PLANTING SPECIFICATION FOR CITY OF HOUSTON.

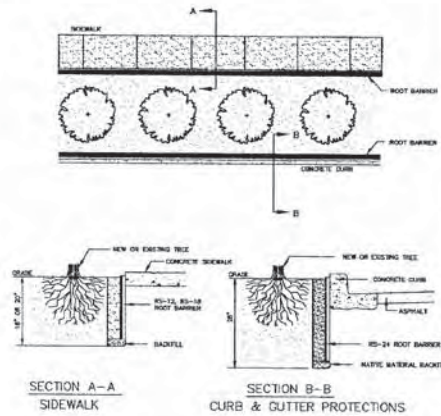
CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
TREE ROOT BARRIERS (CIRCULAR)
NOT TO SCALE

5 TREE ROOT BARRIER - CIRCULAR

NOT TO SCALE

4 TREE PLANTING

NOT TO SCALE



- NOTES:**
- INSTALLATION TO BE COMPALED IN ALL SITUATIONS WITH MAJOR CONTRACT'S SPECIFICATIONS.
 - THE MAINLINE ROOT GUARDING RIBS MUST BE FACING TOWARDS THE TREE ROOTS.
 - THE TOP OF THE BARRIER PANELS MUST BE 3/8" TO 1" ABOVE GRADE (NEVER BELOW GRADE).
 - POSITION BARRIER PANELS VERTICALLY WITH TOP AGAINST THE STRUCTURE TO BE PROTECTED.
 - SEE LANDSCAPE WELLS PLAN TO DETERMINE TREES THAT REQUIRE BARRIERS PANEL.
 - KEEP THE BARRIER TOP EDGE AT LEAST 1/2" ABOVE GRADE.

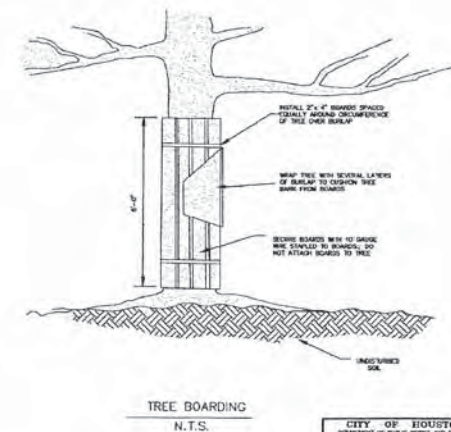
CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
TREE ROOT BARRIERS (LINEAR)
NOT TO SCALE

3 TREE ROOT BARRIER - LINEAR

NOT TO SCALE

2 PLANT LIST

NOT TO SCALE



TREE BOARDING
N.T.S.

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
TREE BOARDING
NOT TO SCALE

1 TREE BOARDING

NOT TO SCALE



TYPE 150
303 BRADSHAW BLVD, SUITE 200
HOUSTON, TEXAS 77056
PHONE: (713) 868-1000
FAX: (713) 868-8000

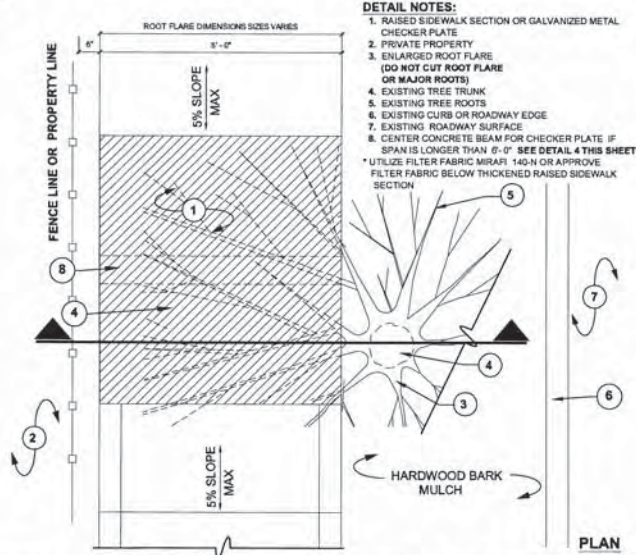


CERTIFIED ARBORTIST
STATE OF TEXAS
LAWRENCE J. WILSON
MARCH 2018

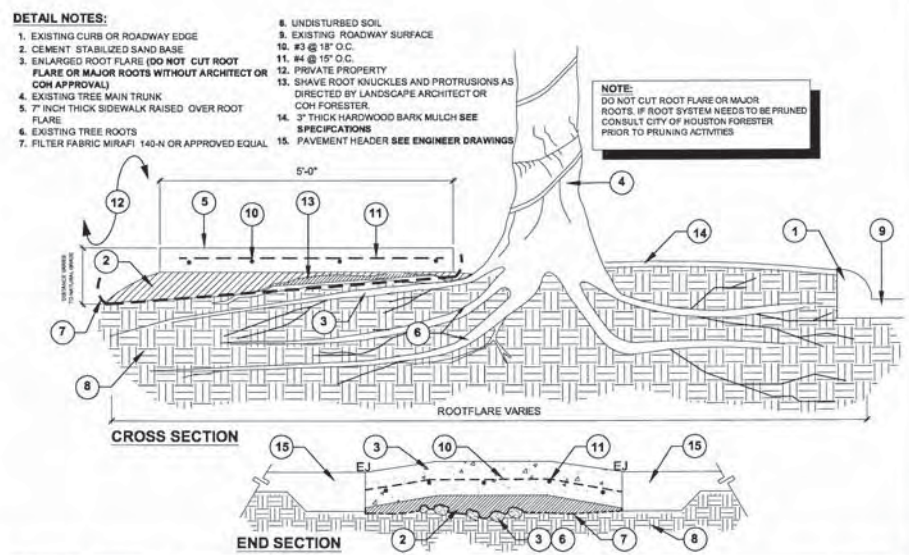
CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING
PLANTING DETAILS AND TREE PRESERVATION DETAILS
SHEET 1 of 3

WBS NUMBER	M-00285-0201-4
DRAWING SCALE	AS SHOWN
CITY OF HOUSTON PM	JEFFREY T. HALL, P.E.
DATE	02/28/18
SHEET NO.	304 OF 388

55620



- DETAIL NOTES:**
1. RAISED SIDEWALK SECTION OR GALVANIZED METAL CHECKER PLATE
 2. PRIVATE PROPERTY
 3. ENLARGED ROOT FLARE (DO NOT CUT ROOT FLARE OR MAJOR ROOTS)
 4. EXISTING TREE TRUNK
 5. EXISTING TREE ROOTS
 6. EXISTING CURB OR ROADWAY EDGE
 7. EXISTING ROADWAY SURFACE
 8. CENTER CONCRETE BEAM FOR CHECKER PLATE IF SPAN IS LONGER THAN 6'-0" SEE DETAIL 4 THIS SHEET
- * UTILIZE FILTER FABRIC MIRAFI 140-N OR APPROVE FILTER FABRIC BELOW THICKENED RAISED SIDEWALK SECTION

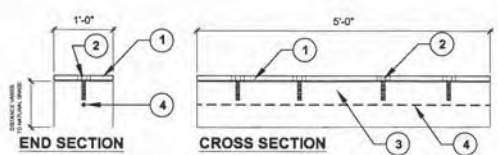


- DETAIL NOTES:**
1. EXISTING CURB OR ROADWAY EDGE
 2. CEMENT STABILIZED SAND BASE
 3. ENLARGED ROOT FLARE (DO NOT CUT ROOT FLARE OR MAJOR ROOTS WITHOUT ARCHITECT OR COH APPROVAL)
 4. EXISTING TREE MAIN TRUNK
 5. 7" INCH THICK SIDEWALK RAISED OVER ROOT FLARE
 6. EXISTING TREE ROOTS
 7. FILTER FABRIC MIRAFI 140-N OR APPROVED EQUAL
 8. UNDISTURBED SOIL
 9. EXISTING ROADWAY SURFACE
 10. #3 @ 18" O.C.
 11. #4 @ 15" O.C.
 12. PRIVATE PROPERTY
 13. SHAVE ROOT KNUCKLES AND PROTRUSIONS AS DIRECTED BY LANDSCAPE ARCHITECT OR COH FORESTER
 14. 3" THICK HARDWOOD BARK MULCH SEE SPECIFICATIONS
 15. PAVEMENT HEADER SEE ENGINEER DRAWINGS

NOTE:
DO NOT CUT ROOT FLARE OR MAJOR ROOTS. IF ROOT SYSTEM NEEDS TO BE PRUNED CONSULT CITY OF HOUSTON FORESTER PRIOR TO PRUNING ACTIVITIES

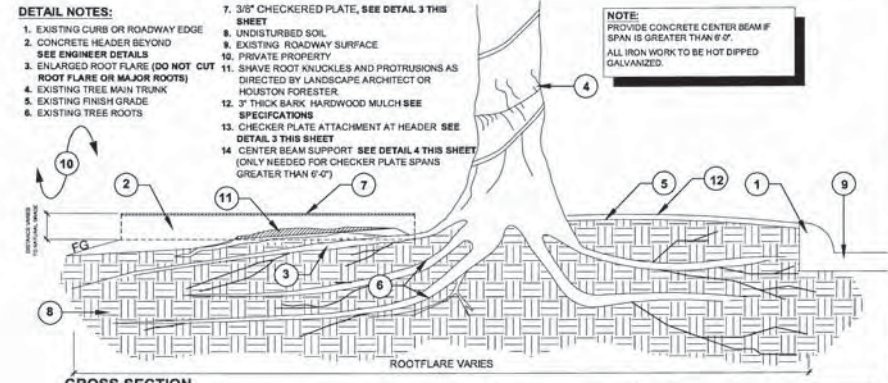
5 ROOT FLARE OVER SIDEWALK INSTALLATION DETAIL PLAN VIEW NOT TO SCALE

2 RAISED SIDEWALK OVER ROOT FLARE NOT TO SCALE



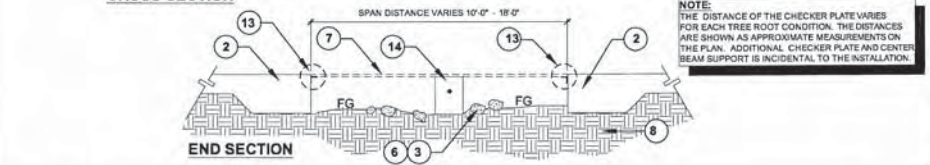
- DETAIL NOTES:**
1. 3/8" GALVANIZED CHECKER PLATE, FOR ATTACHMENT TO SIDEWALK
 2. PROVIDE FOUR (4) 1/2" VANDAL PROOF COUNTER SUNK CONCRETE ANCHOR BOLTS ON EACH SIDE
 3. 3,000 PSI CONCRETE
 4. #4 REBAR HORIZONTAL CONTINUOUS

4 CHECKER PLATE CENTER BEAM SUPPORT NOT TO SCALE



- DETAIL NOTES:**
1. EXISTING CURB OR ROADWAY EDGE
 2. CONCRETE HEADER BEYOND SEE ENGINEER DETAILS
 3. ENLARGED ROOT FLARE (DO NOT CUT ROOT FLARE OR MAJOR ROOTS)
 4. EXISTING TREE MAIN TRUNK
 5. EXISTING FINISH GRADE
 6. EXISTING TREE ROOTS
 7. 3/8" CHECKERED PLATE, SEE DETAIL 3 THIS SHEET
 8. UNDISTURBED SOIL
 9. EXISTING ROADWAY SURFACE
 10. PRIVATE PROPERTY
 11. SHAVE ROOT KNUCKLES AND PROTRUSIONS AS DIRECTED BY LANDSCAPE ARCHITECT OR HOUSTON FORESTER
 12. 3" THICK BARK HARDWOOD MULCH SEE SPECIFICATIONS
 13. CHECKER PLATE ATTACHMENT AT HEADER SEE DETAIL 3 THIS SHEET
 14. CENTER BEAM SUPPORT SEE DETAIL 4 THIS SHEET (ONLY NEEDED FOR CHECKER PLATE SPANS GREATER THAN 6'-0")

NOTE:
PROVIDE CONCRETE CENTER BEAM IF SPAN IS GREATER THAN 6'-0". ALL IRON WORK TO BE HOT DIPPED GALVANIZED



NOTE:
THE DISTANCE OF THE CHECKER PLATE VARIES FOR EACH TREE ROOT CONDITION. THE DISTANCES ARE SHOWN AS APPROXIMATE MEASUREMENTS ON THE PLAN. ADDITIONAL CHECKER PLATE AND CENTER BEAM SUPPORT IS INCIDENTAL TO THE INSTALLATION.

3 CENTER BEAM ATTACHMENT AT SIDEWALK NOT TO SCALE

1 CHECKER PLATE OVER ROOT FLARE NOT TO SCALE



SUPERVISED BY: LANDESKO
FE NO. F-000X

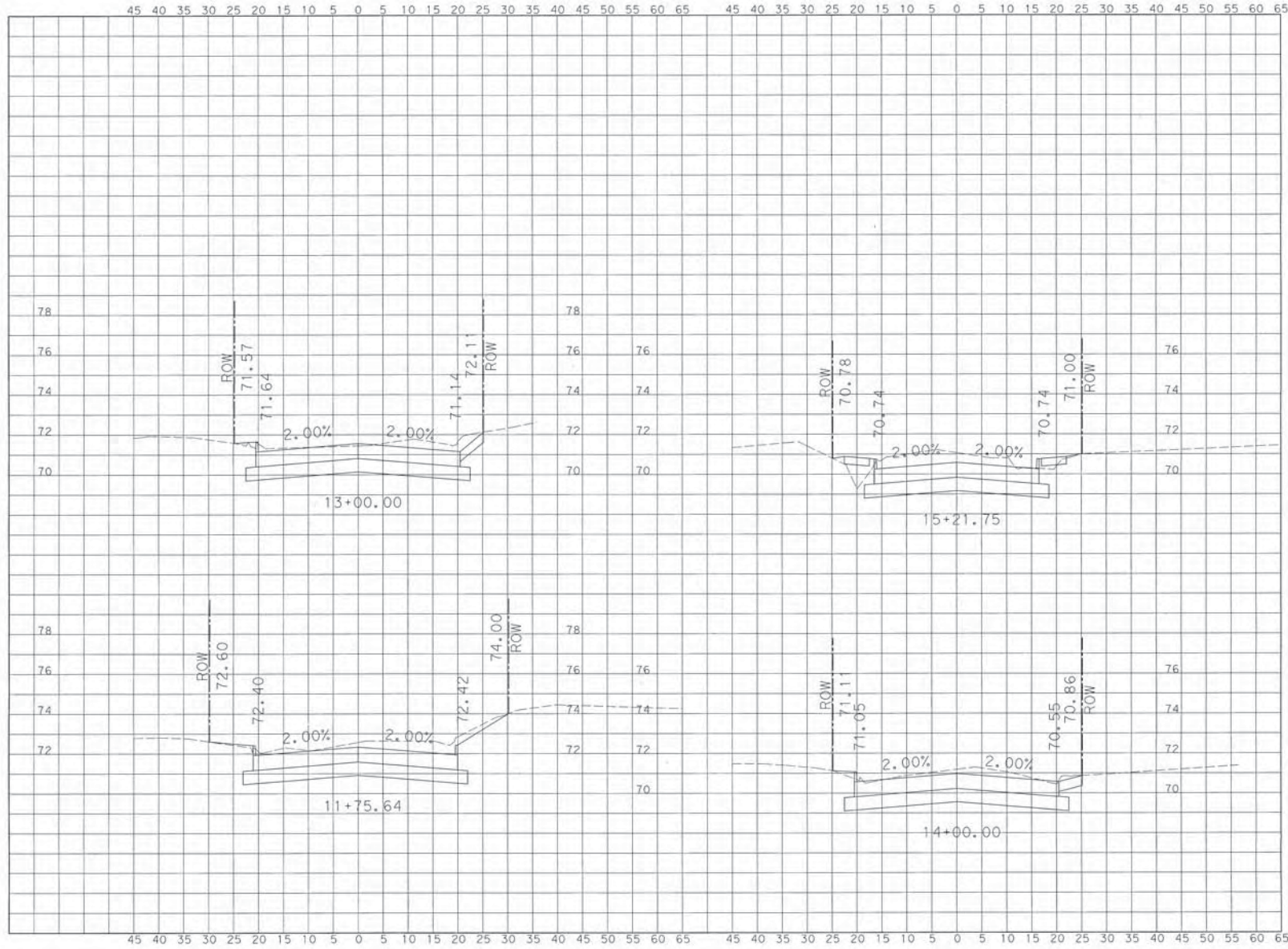
CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING TREE PRESERVATION DETAILS
SHEET 3 of 3

WBS NUMBER	M-000285-0001-4
DRAWING SCALE	AS SHOWN
CITY OF HOUSTON PM	JEFFREY T. HALL, P.E.
DATE	02/28/15
SHEET NO.	306 OF 385

55630

DATE: 04/20/04 4:45 PM
 PROJECT: ALBANY DRIVE SHEPHERD PARK CENTRAL DRAINAGE SHEET 1 OF 10



STATION	DISTANCE (FT)	CUT (SF)		FILL (SF)		CUT (CY)	FILL (CY)
		EA	AVG-EA	EA	AVG-EA		
11+75.64	124.36	45.80	43.20	0.60	0.55	198.98	2.53
13+00.00	100.00	40.60	40.10	0.50	0.60	148.52	2.22
14+00.00	121.75	39.60	39.55	0.70	2.90	178.34	13.08
15+21.75	78.25	42.20	40.85	5.10	5.85	118.39	16.95
16+00.00				6.60		644.23	34.79
TOTAL ALBA						9,220.10	183.66
GRAND TOTAL						18,550.02	1,207.05



CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

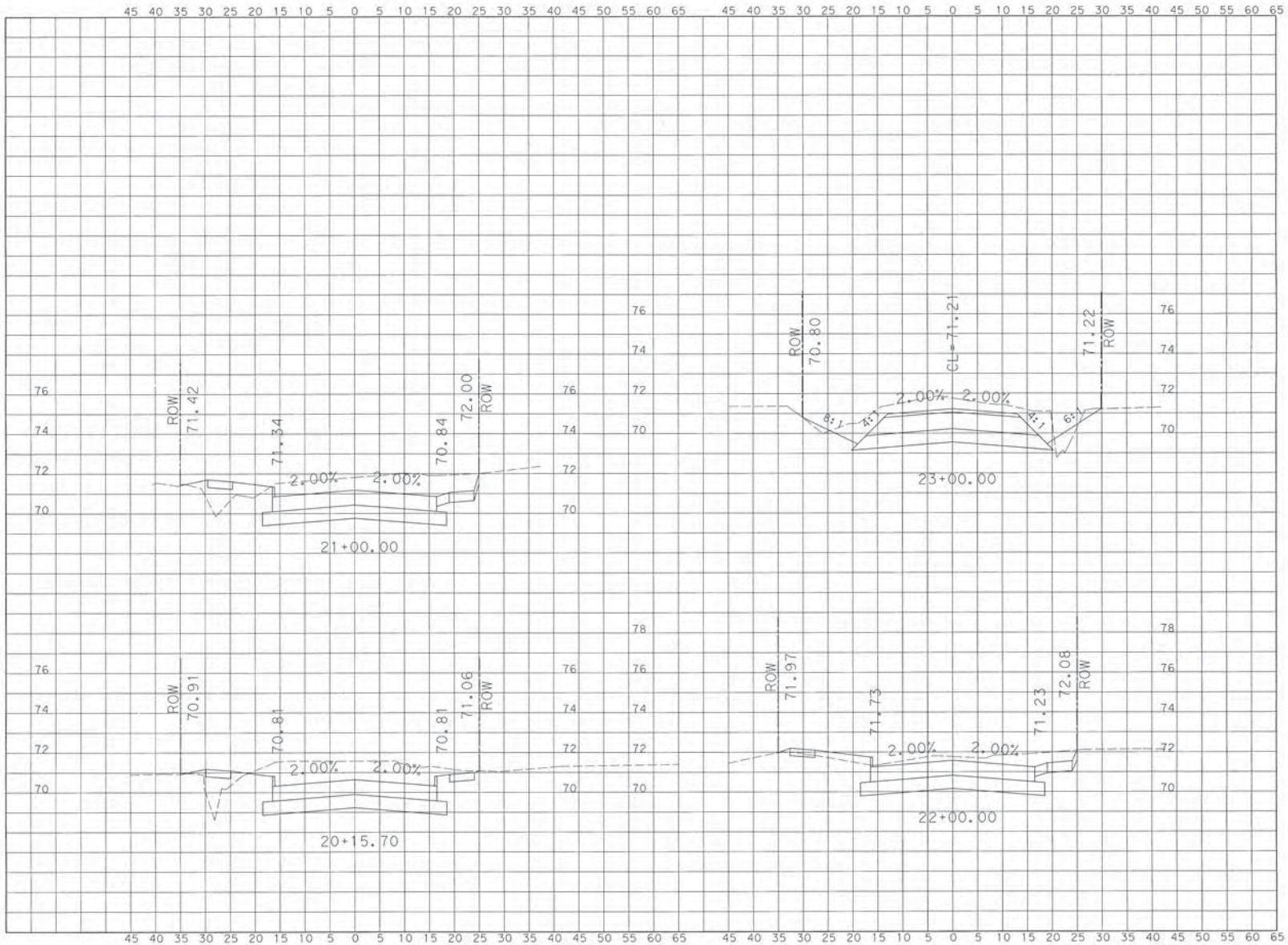
GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING
 ALBA PROPOSED CROSS SECTIONS
 SHEET 1 OF 10

WBS NUMBER	
M-000285-0001-4	
DRAWING SCALE	
HORIZ. 1"=20' VERT. 1"=5'	
CITY OF HOUSTON PM	
DATE	SHEET NO.
4	307 OF 385



DATE	NO.	BY

DATE: 6/28/2011 4:48:18 PM
 AUTOCAD: C:\DWGFILES\2011\20110628\110628001\110628001.dwg
 USER: JEFFREY T. HALL



STATION	DISTANCE (FT)	CUT (SF) EA	CUT (SF) AVG-EA	FILL (SF) EA	FILL (SF) AVG-EA	CUT (CY)	FILL (CY)
20+15.70	84.30	63.90	7.50	8.90	8.90	196.86	27.79
21+00.00	100.00	62.20	10.30	7.10	7.10	196.30	26.30
22+00.00	100.00	43.80	3.90	4.05	4.05	191.67	15.00
23+00.00	100.00	59.70	65.15	4.20	2.95	241.30	10.93
24+00.00	100.00	70.60	1.70			826.12	80.01
TOTAL THIS SHEET						9,220.10	183.66
TOTAL ALBA						18,550.02	1,207.05
GRAND TOTAL							



PGAL
 3131 BRADSHAW, SUITE 200
 HOUSTON, TEXAS 77042
 PHONE (713) 622-1444
 FAX (713) 968-9333
 SURVEYED BY: LANDTECH
 FB NO. P-5576

CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

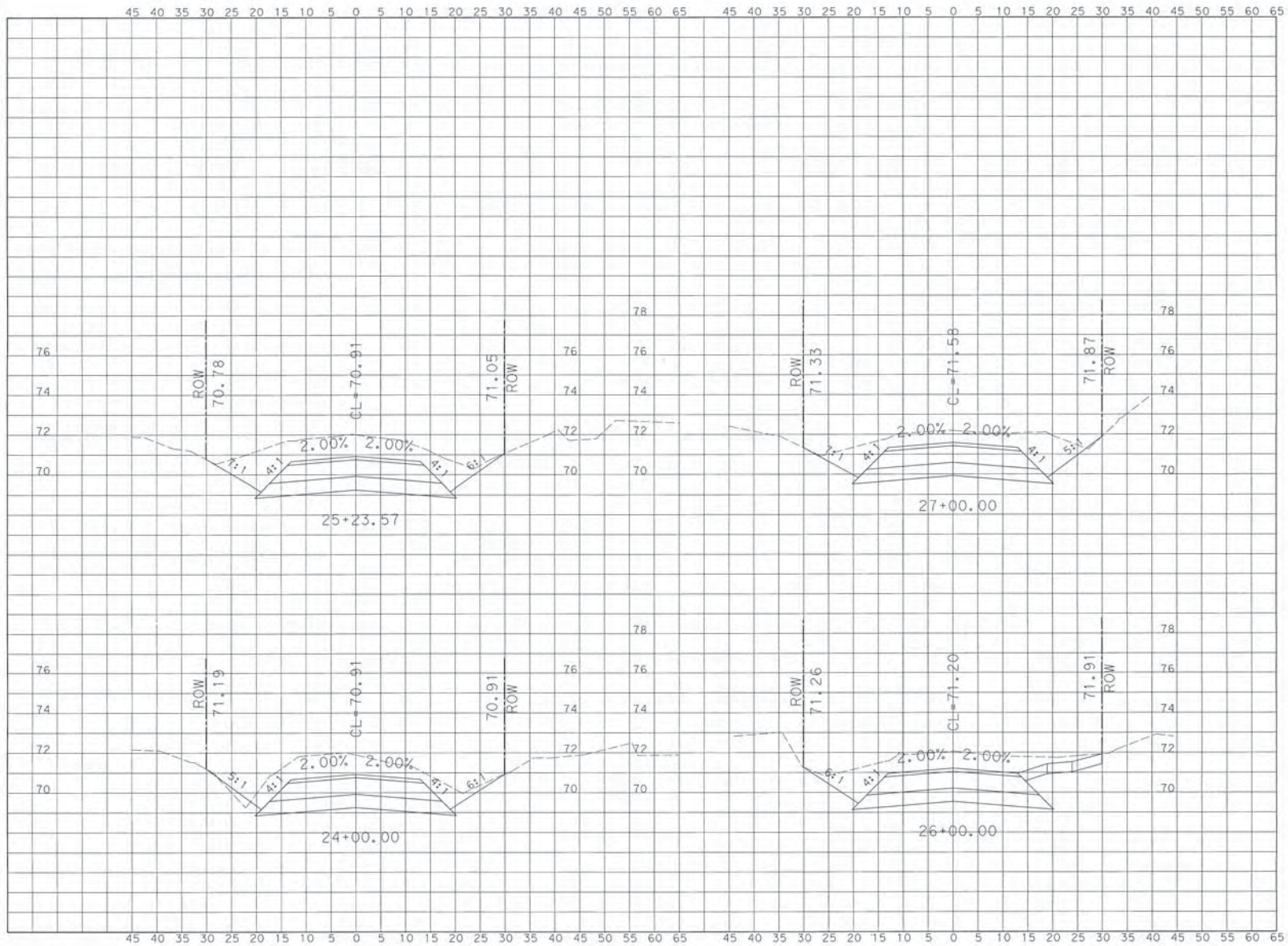
GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING
 ALBA PROPOSED CROSS SECTIONS
 SHEET 3 OF 10

MDS NUMBER	
M-000285-0001-4	
DRAWING SCALE	
HORIZ. 1"=20' VERT. 1"=5'	
CITY OF HOUSTON PM	
DATE	SHEET NO.
—	309 OF 385



No. 10874
 Date: 6/28/11

DATE: 6/29/2016
 AUTOCAD: 2016
 USER: JEFFREY T. HALL



STATION	DISTANCE (FT)	CUT (SF)		FILL (SF)		CUT (CY)	FILL (CY)
		EA	AVG-EA	EA	AVG-EA		
24+00.00	123.57	70.60	79.65	1.70	0.85	364.53	3.89
25+23.57	76.43	88.70	84.55	0.00	0.00	239.34	0.00
26+00.00	100.00	80.40	78.55	0.00	0.10	290.93	0.37
27+00.00	100.00	76.70	85.90	0.20	0.10	318.15	0.37
28+00.00	95.10	95.10	0.00	0.00	0.00	1,212.94	4.63
TOTAL THIS SHEET						9,220.10	183.66
TOTAL ALBA						18,550.02	1,207.05
GRAND TOTAL							



PGAL
 DISTRICT OF TEXAS
 COSTAS L. GERONIMO
 58215
 3131 BRADSHAW, SUITE 200
 HOUSTON, TEXAS 77042
 PHONE (713) 622-1444
 FAX (713) 958-9333

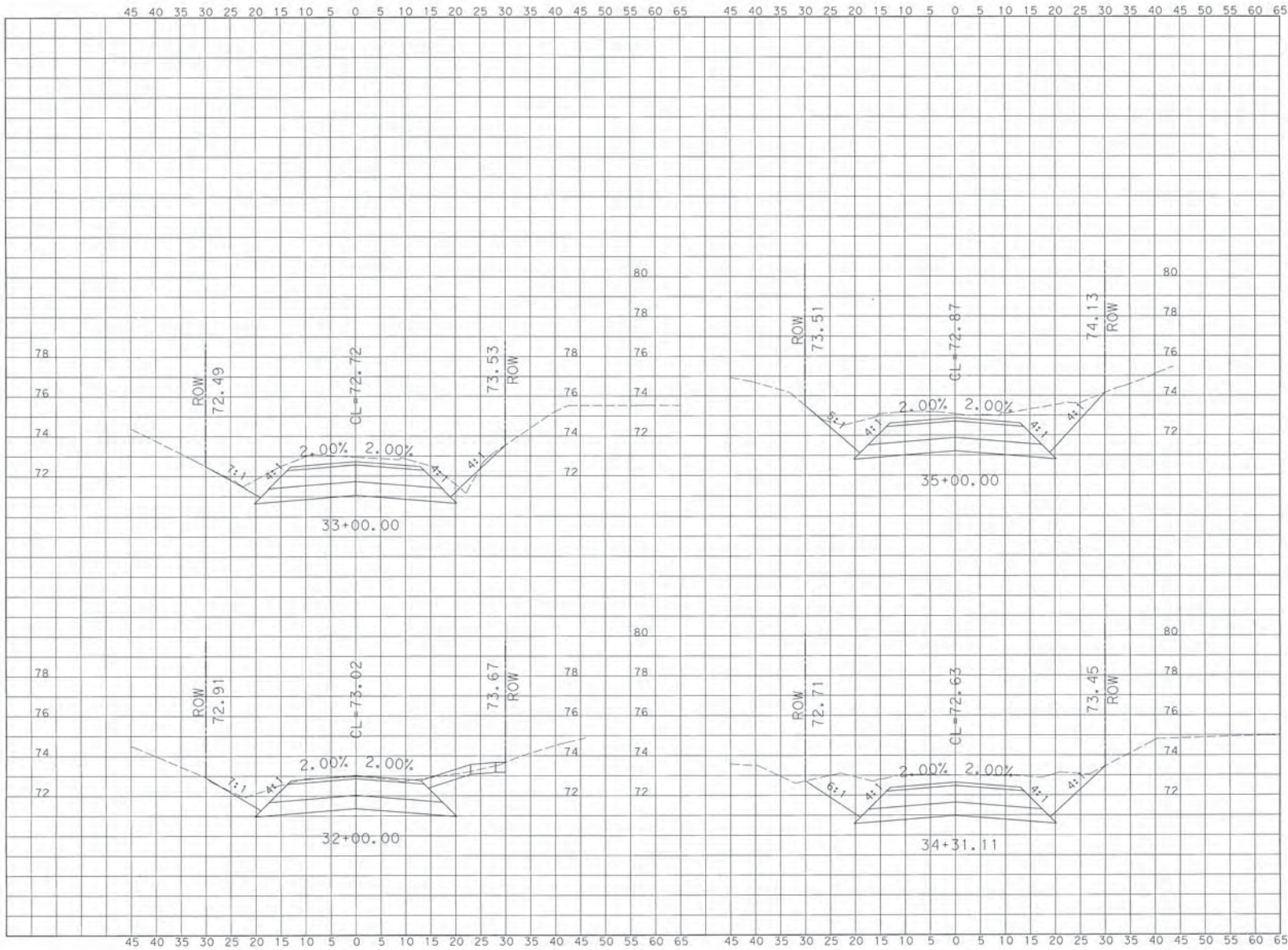
SURVEYED BY: LANDTECH
 FB NO. P-5576

CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
 GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING
 ALBA PROPOSED CROSS SECTIONS
 SHEET 4 OF 10

WBS NUMBER	
M-000285-0001-4	
DRAWING SCALE	
HORIZ. 1"=20' VERT. 1"=5'	
CITY OF HOUSTON PM	
JEFFREY T. HALL, P.E.	
DATE	SHEET NO.
—	310 OF 385



DATE: 10/29/2015 4:40:07 PM
 PROJECT: 1502740000 - D:\Projects\1502740000\Cross Sections\Sheet6.dwg



STATION	DISTANCE (FT)	CUT (SE) EA	CUT (SE) AVG-EA	FILL (SE) EA	FILL (SE) AVG-EA	CUT (CY)	FILL (CY)
32+00.00	100.00	39.40	44.40	0.10	0.55	164.44	2.04
33+00.00	131.11	49.40	65.05	1.00	0.50	315.88	2.43
34+31.11	68.89	80.70	76.60	0.00	0.00	195.44	0.00
35+00.00	100.00	72.50	70.85	0.00	0.00	262.41	0.00
36+00.00	69.20					938.17	4.47
TOTAL THIS SHEET						9,220.10	183.66
TOTAL ALBA						18,550.02	1,207.05
GRAND TOTAL							



SUPERVISED BY: LANDECH P-6376
 CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

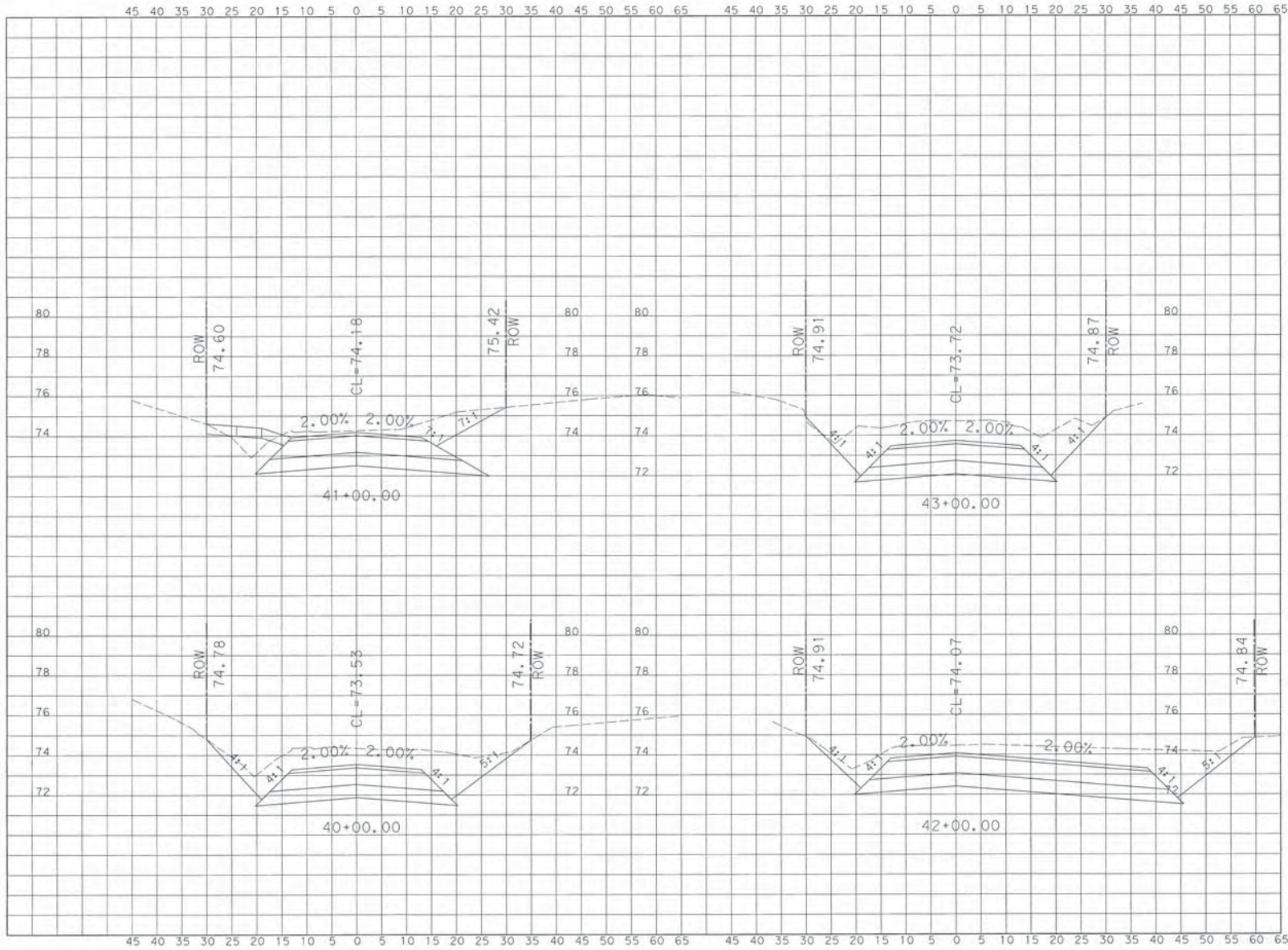
GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING
 ALBA PROPOSED CROSS SECTIONS
 SHEET 6 OF 10

MDS NUMBER	
M-000285-0001-4	
DRAWING SCALE	
HORIZ. 1"=20' VERT. 1"=5'	
CITY OF HOUSTON PM	
JEFFREY T. HALL, P.E.	
DATE	SHEET NO.
	312 OF 385



DATE: 10/29/2015 4:40:07 PM
 PROJECT: 1502740000 - D:\Projects\1502740000\Cross Sections\Sheet6.dwg

DATE: 6/26/2005 4:40:05 PM
PROJECT: ALBA CROSS SECTIONS
DRAWN BY: JTC/VA/ABO/Cross Section Sheets.dwg



STATION	DISTANCE (FT.)	CUT (SF) EA	AVG-EA	FILL (SF) EA	AVG-EA	CUT (CY)	FILL (CY)
40+00.00	100.00	91.20	73.00	0.00	0.00	270.37	7.59
41+00.00	100.00	54.80	89.10	4.10	2.05	350.00	7.59
42+00.00	100.00	123.40	109.95	0.00	0.15	407.22	0.56
43+00.00	132.76	96.50	95.20	0.30	0.25	468.10	1.23
44+32.36	93.90			0.20		1,475.69	16.97
TOTAL ALBA						9,220.10	183.66
GRAND TOTAL						18,550.02	1,207.05



PGAL
3151 BIRCHWOOD, SUITE 200
 HOUSTON, TEXAS 77042
 PHONE (713) 622-1844
 FAX (713) 989-9333

SURVEYED BY: LANDTECH
 P-5236

CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

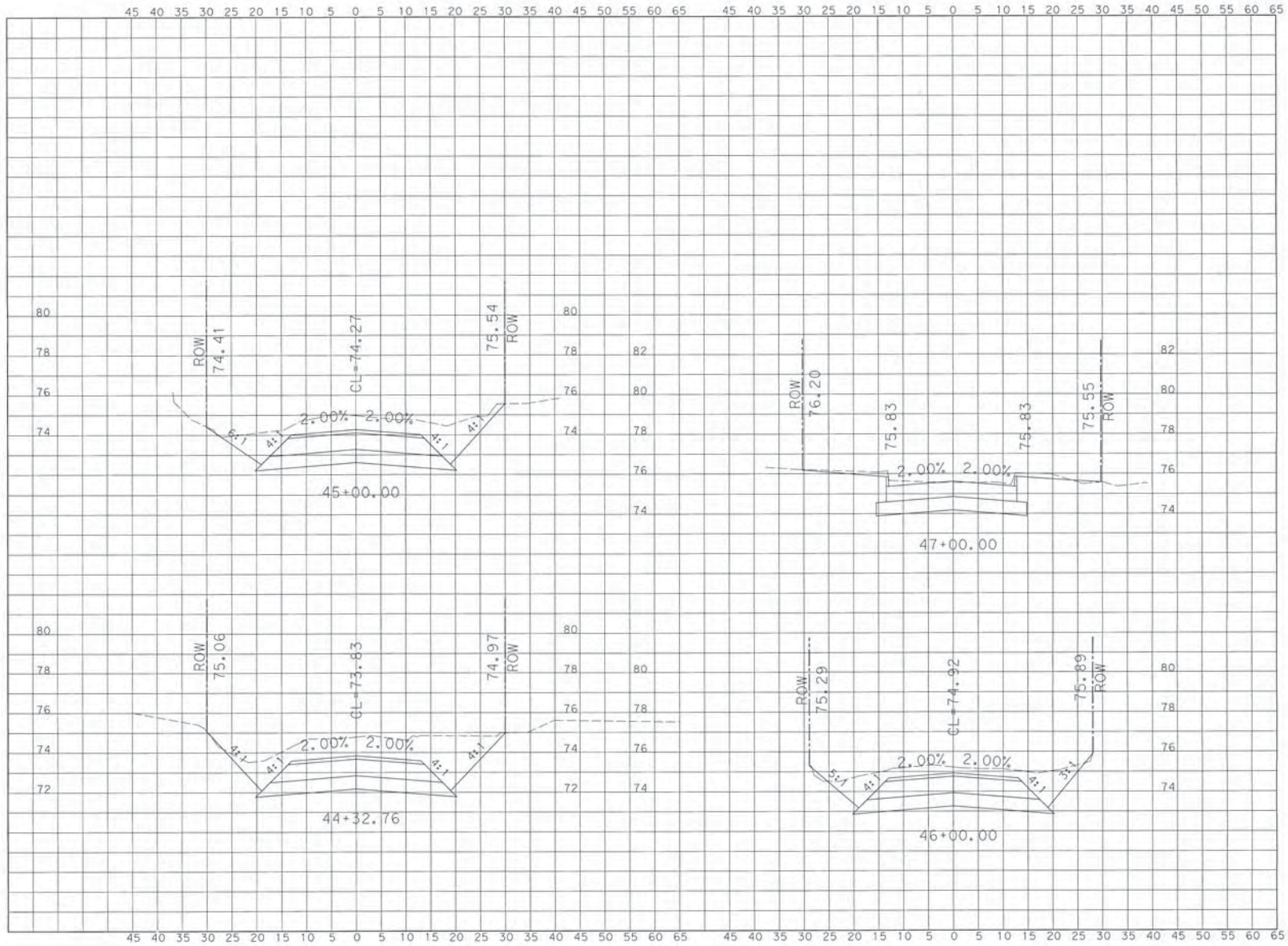
GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING
 ALBA PROPOSED CROSS SECTIONS
 SHEET 8 OF 10

WBS NUMBER: M-000285-0001-4
 DRAWING SCALE: HORIZ. 1"=20' VERT. 1"=5'
 CITY OF HOUSTON PW
 JEFFREY T. HALL, P.E.
 DATE: SHEET NO. 314 OF 385

55630

NO.	DATE	REVISIONS

DATE: 8/24/2015
 TIME: 10:00:00
 USER: JEFFREY T. HALL



STATION	DISTANCE (FT)	CUT (SF) EA	CUT (SF) AVG-EA	FILL (SF) EA	FILL (SF) AVG-EA	CUT (CY)	FILL (CY)
44+32.76	67.24	93.90	86.50	0.20	0.10	215.42	0.25
45+00.00	100.00	79.10	71.65	0.00	0.40	265.37	1.48
46+00.00	100.00	64.20	69.50	0.80	0.40	257.41	1.48
47+00.00	100.00	74.80	74.85	0.00	0.00	277.22	0.00
48+00.00		74.90		0.00		1,015.42	3.21
TOTAL THIS SHEET						9,220.10	133.66
TOTAL ALBA						18,550.02	1,207.05
GRAND TOTAL							



SURVEYED BY: LANDTECH
 P-0476
 CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

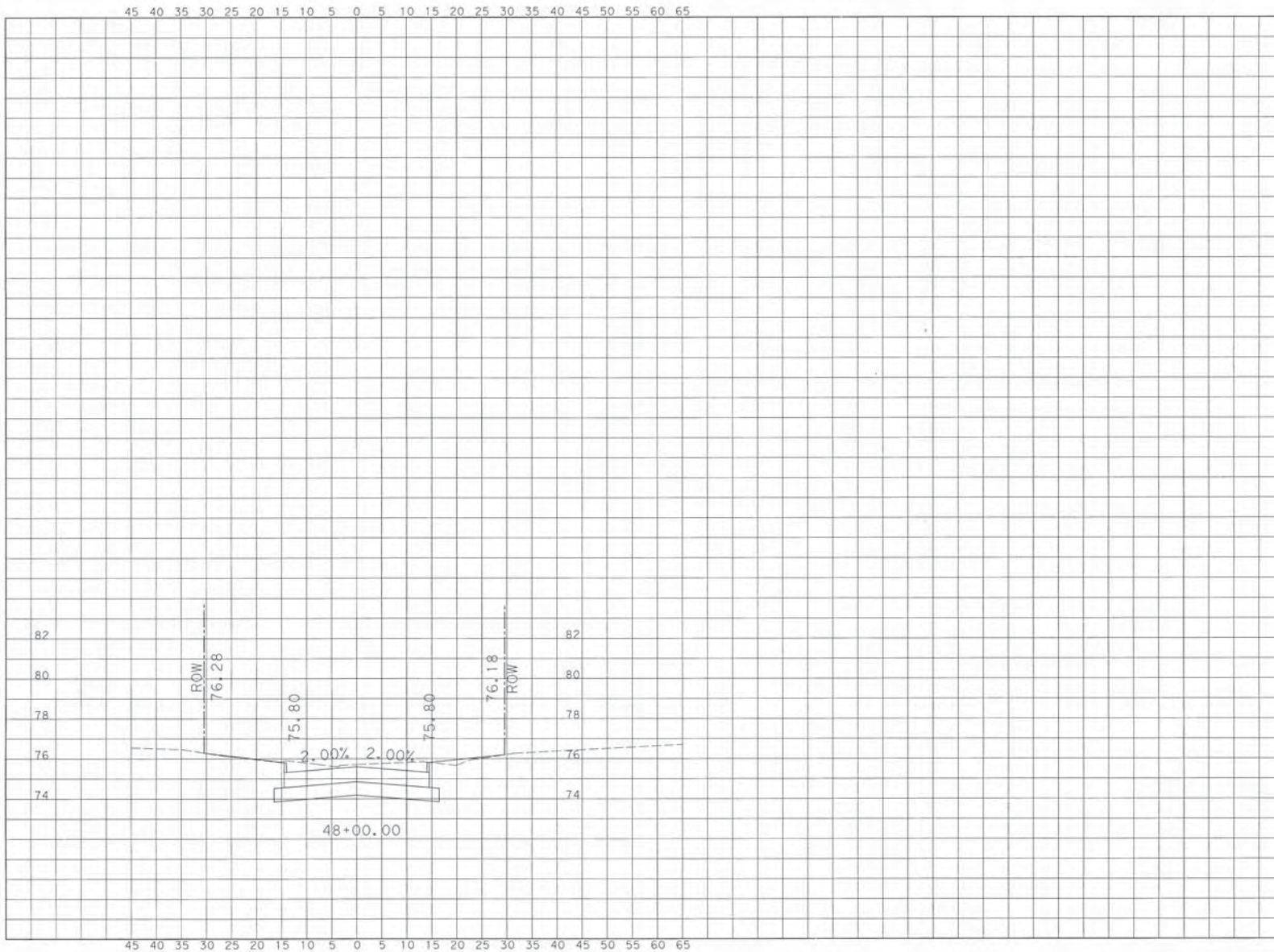
GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING
 ALBA PROPOSED CROSS SECTIONS
 SHEET 9 OF 10

WDS NUMBER	
M-000285-0001-4	
DRAWING SCALE	
HORIZ. 1"=20' VERT. 1"=5'	
CITY OF HOUSTON PM	
JEFFREY T. HALL, P.E.	
DATE	SHEET NO.
	315 OF 385



NO.	DATE	REVISION

DATE: 9/29/05
 A:\020945-020\000 - 020\020945-020\020\020.dwg
 4:45:14 PM
 020945-020\020\020.dwg
 User: jhall



STATION	DISTANCE (FT)	CUT (SF) EA	CUT (SF) AVG-EA	FILL (SF) EA	FILL (SF) AVG-EA	CUT (CY)	FILL (CY)
47+00.00	100.00	74.80	74.85	0.00	0.00	277.22	0.00
48+00.00		74.90		0.00		277.22	0.00
TOTAL THIS SHEET						9,220.10	183.66
TOTAL ALBA						18,550.02	1,207.05
GRAND TOTAL							

SDPS
Houston Storm Drainage Program Support

PGAL

313 BRADSHAW, SUITE 200
HOUSTON, TEXAS 77042
PHONE (713) 622-1444
FAX (713) 966-8333

COSTAS K. GEORGIADES
36815

SURVEYED BY: LANDTECH
FB NO. P-5576

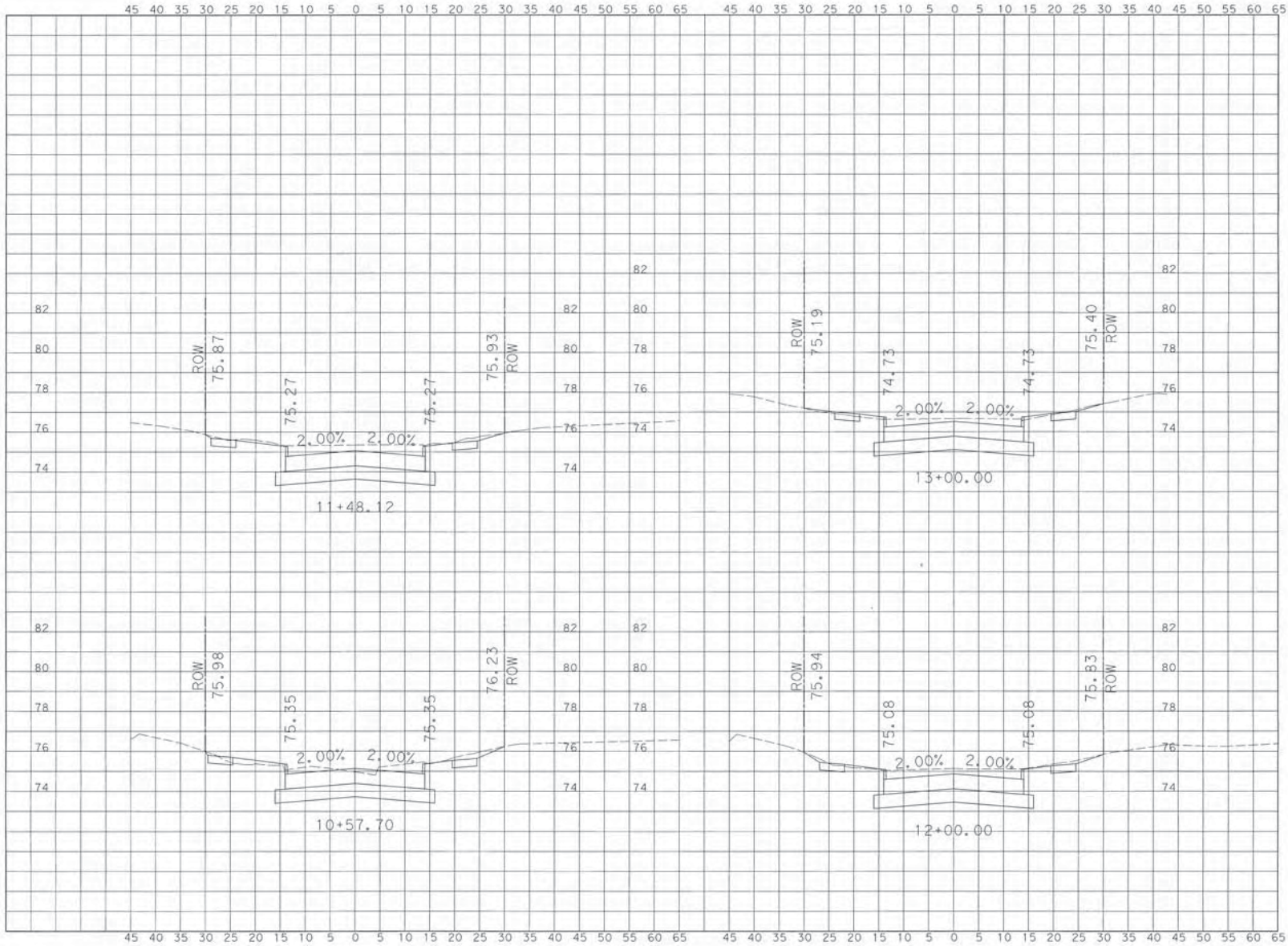
CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING
ALBA PROPOSED CROSS SECTIONS
SHEET 10 OF 10

WBS NUMBER	
M-000285-0001-4	
DRAWING SCALE	
HORIZ. 1"=20' VERT. 1"=5'	
CITY OF HOUSTON PM	
JEFFREY T. HALL, P.E.	
DATE	SHEET NO.
—	316 OF 385

55630

DATE: 9/29/2015 4:40:11 PM
 P:\MDD\945-CA\10801_DWG\Drawings\SEFC\Chamber\Chamberboard Cross Section Sheets.dwg



STATION	DISTANCE (FT)	CUT (SF)		FILL (SF)		CUT (CY)	FILL (CY)
		EA	AVG-EA	EA	AVG-EA		
10+57.70	90.42	30.90	35.05	2.10	1.10	117.38	3.68
11+48.12	51.88	39.20	37.60	0.10	0.20	72.25	0.38
12+00.00	100.00	36.00	33.95	0.30	1.00	125.74	3.70
13+00.00		31.90		1.70		315.37	7.77
TOTAL THIS SHEET						1,191.84	49.39
TOTAL CHAMBOARD						18,288.91	1,193.07
GRAND TOTAL							



SURVEYED BY: LANDTECH
 P-5514

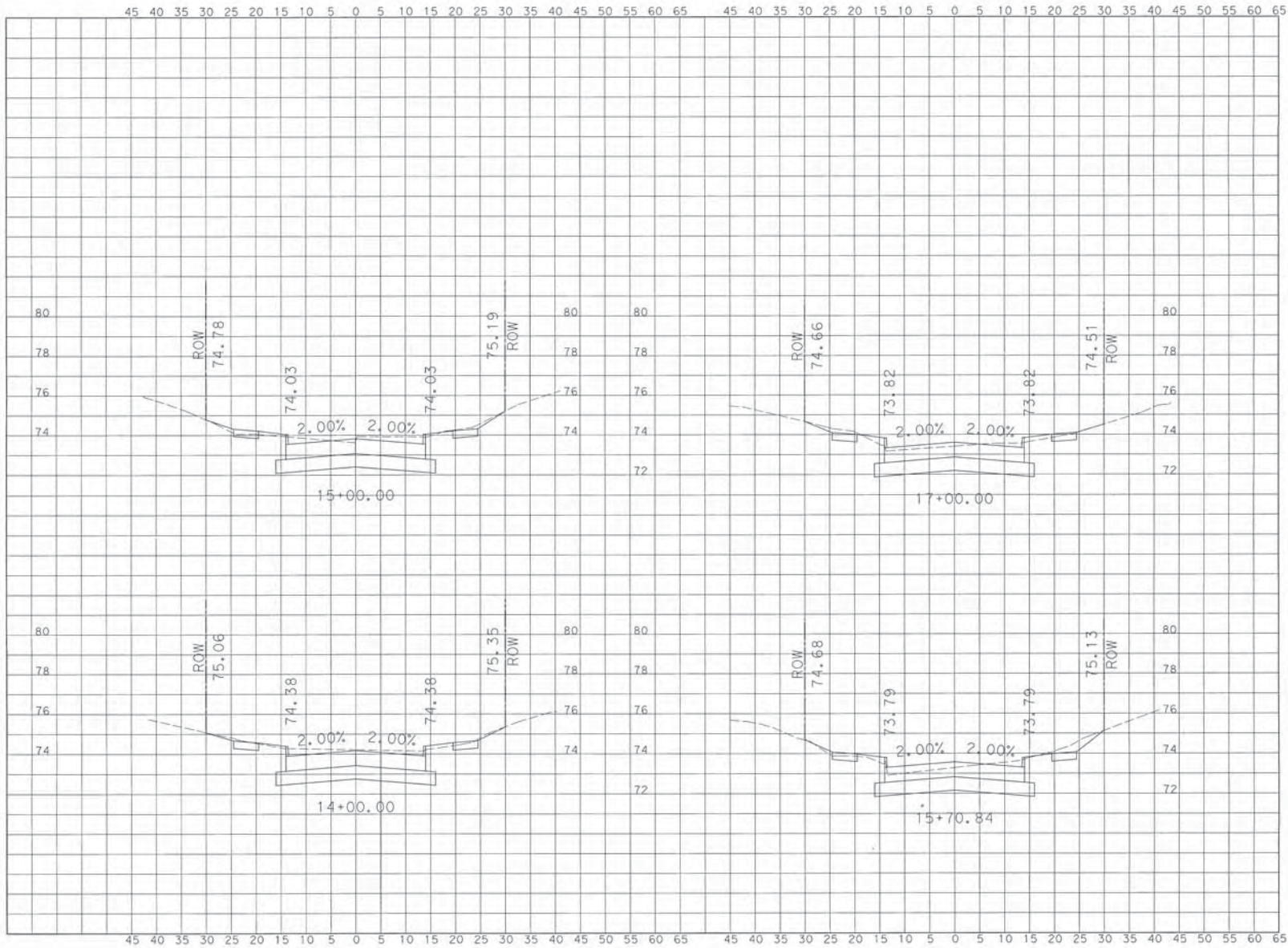
CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING
 CHAMBOARD PROPOSED CROSS SECTIONS
 SHEET 1 OF 3

WBS NUMBER	M-000285-0001-4
DRAWING SCALE	
HORIZ. 1"=20'	VERT. 1"=4'
CITY OF HOUSTON PM	
JEFFREY T. HALL, P.E.	
DATE	SHEET NO.
	317 OF 385



DATE: 01/28/2025 4:45 PM
 DRAWING: D:\Projects\2025\25000\Drawings\Chamboard Cross Section.dwg



STATION	DISTANCE (FT)	CUT (SF)		FILL (SF)		CUT (CY)	FILL (CY)
		EA	AVG-EA	EA	AVG-EA		
13+00.00	100.00	31.90	31.05	1.70	1.55	115.00	5.74
14+00.00	100.00	30.20	29.75	1.40	1.50	110.19	5.56
15+00.00	70.84	29.30	26.10	1.60	1.55	68.48	4.07
15+70.84	129.16	22.90	23.35	1.50	1.85	111.70	8.85
17+00.00		23.80		2.20			
TOTAL THIS SHEET						405.36	24.21
TOTAL CHAMBOARD						1,191.84	49.39
GRAND TOTAL						18,288.91	1,193.07



SURVEYED BY: LANDTECH P. 05/16

CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING
 CHAMBOARD PROPOSED CROSS SECTIONS

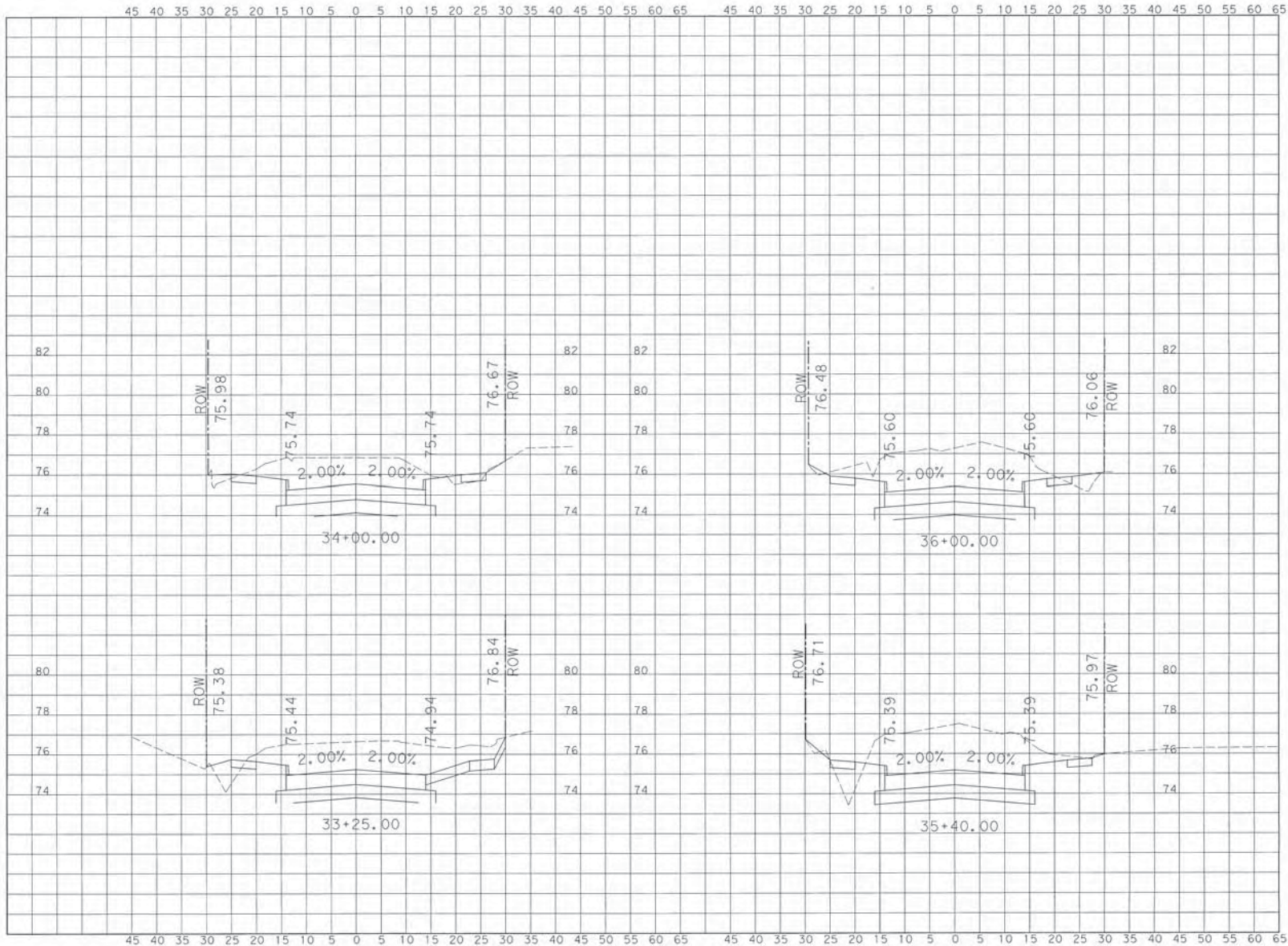
SHEET 2 OF 3

WBS NUMBER	
M-000285-0001-4	
DRAWING SCALE	
HORIZ. 1"=20' VERT. 1"=5'	
CITY OF HOUSTON PW	
DATE	SHEET NO.
	318 OF 385



NO. 1 DATE

DATE: 10/29/2025 4:47:54 PM
 AUTOCAD: C:\Users\AS\OneDrive\Documents\AS\Projects\2025\10\10-29-25\10-29-25.dwg



STATION	DISTANCE (FT)	CUT (SF)		FILL (SF)		EA	AVG-EA	EA	AVG-EA	CUT (CY)	FILL (CY)	
		EA	AVG-EA	EA	AVG-EA							
32+00.00	125.00	65.70	78.30	13.30	9.00	9.00	362.50	41.67				
33+25.00	75.00	90.30	79.10	4.70	3.65	219.72	10.14					
34+00.00	140.00	67.30	79.95	2.60	4.60	474.56	23.85					
35+40.00	60.00	92.60	91.60	6.60	5.10	203.56	11.33					
TOTAL THIS SHEET											1,200.33	86.99
TOTAL BRINKMAN											5,465.19	906.06
GRAND TOTAL											18,288.91	1,193.07



SURVEYED BY: LANDTECH
 FIG. NO. 10-1516

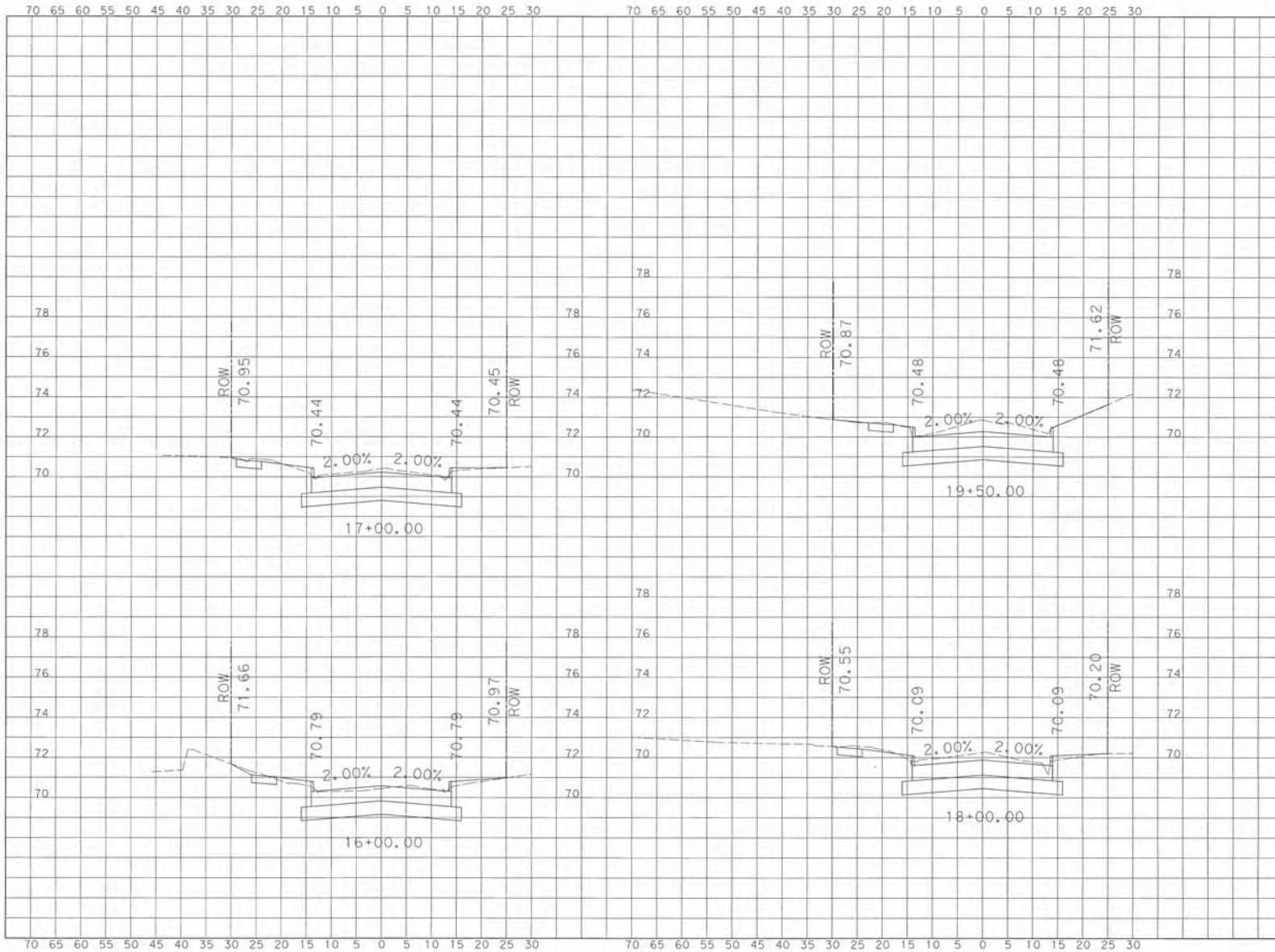
CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING
 BRINKMAN PROPOSED CROSS SECTIONS
 SHEET 5 OF 5

WBS NUMBER	
M-000285-0001-4	
DRAWING SCALE	
HORIZ. 1"=20' VERT. 1"=5'	
CITY OF HOUSTON PM	
JEFFREY T. HALL, P.E.	
DATE	SHEET NO.
	324 OF 385



DATE: 9/29/2015 4:40:38 PM
 DRAWING: S:\000005\000000\DWG\000005\SEC\718W\718W_Cross_Section_SDW.dwg



STATION	DISTANCE (FT)	CUT (SF)		FILL (SF)		CUT (CY)	FILL (CY)	
		EA	AVG-EA	EA	AVG-EA			
16+00.00	100.00	22.60	24.65	2.70	2.15	91.30	7.96	
17+00.00	100.00	26.70	28.65	1.60	1.60	106.11	5.93	
18+00.00	150.00	30.60	31.75	1.60	1.05	176.39	5.83	
19+50.00	50.00	32.90	44.65	0.50	0.25	82.69	0.46	
20+00.00		56.40	0.00	0.00		456.48	20.19	
TOTAL THIS SHEET							1,690.74	34.44
TOTAL FISHER							18,550.02	1,207.05
GRAND TOTAL								

SDPS
Houston Storm Drainage
Program Support

PGAL
Professional Geometric Associates, L.P.
3131 BRIDGEMAN, SUITE 200
HOUSTON, TEXAS 77042
PHONE (713) 623-1444
FAX (713) 668-9333

SURVEYED BY: LANDTECH
 F.B. NO. P-5576

CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

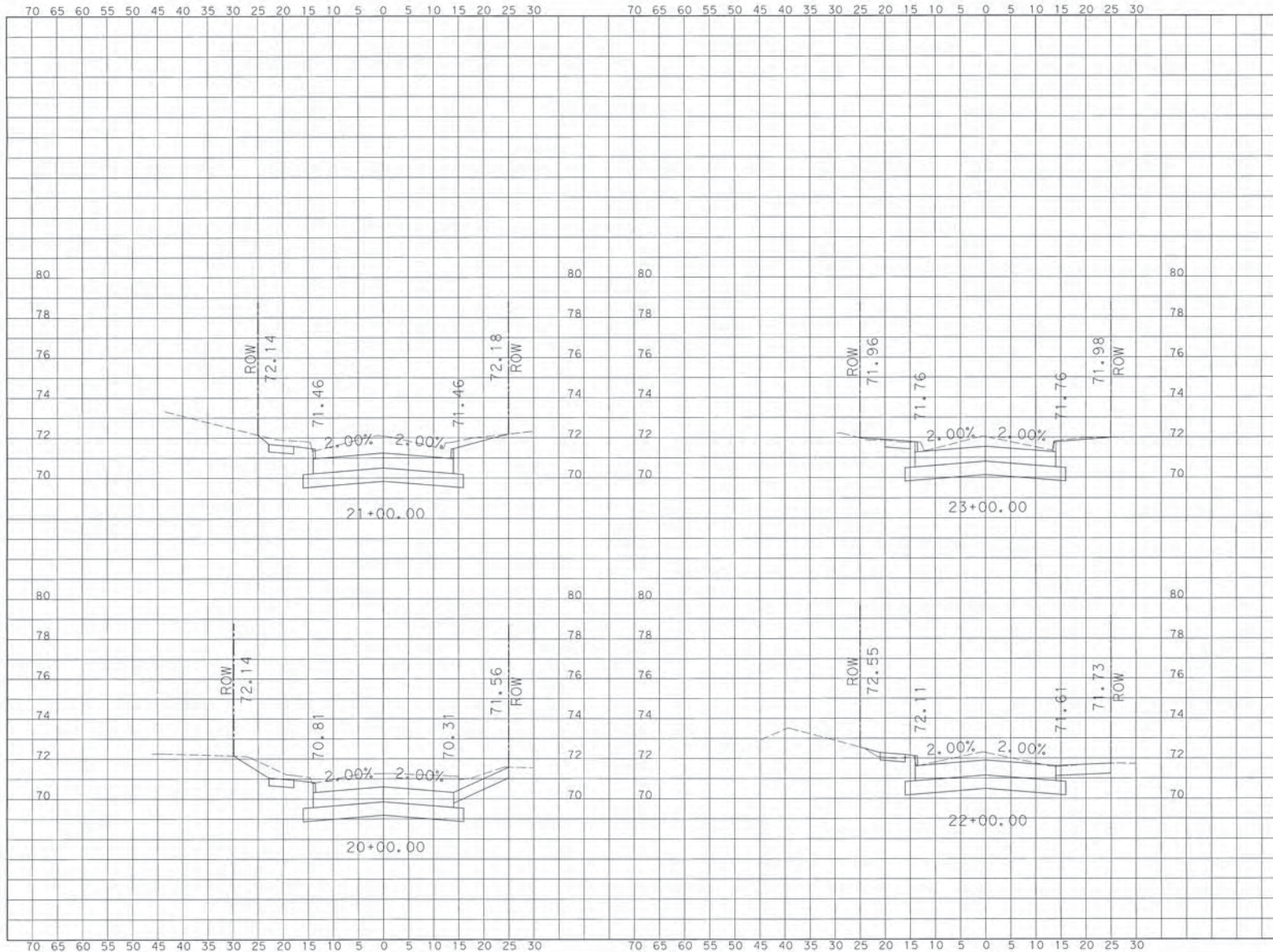
GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING FISHER PROPOSED CROSS SECTIONS

SHEET 2 OF 4

WBS NUMBER	M-000285-0001-4
DRAWING SCALE	
HORIZ. 1"=20' VERT. 1"=5'	
CITY OF HOUSTON PM	
JEFFREY T. HALL, P.E.	
DATE SHEET NO.	
326 OF 385	

DATE: 9/29/2015 4:40:38 PM
 DRAWING: S:\000005\000000\DWG\000005\SEC\718W\718W_Cross_Section_SDW.dwg

DATE: 04/26/2016 4:45:31 PM
 AUCTION: 04/26/2016 08:00:00: D:\Houston\GIS\City\Water\Cross Sections Sheets.dwg



STATION	DISTANCE (FT)	CUT (SF)		FILL (SF)		CUT (CY)	FILL (CY)	
		EA	AVG-EA	EA	AVG-EA			
20+00.00	100.00	56.40	51.35	0.00	0.00	190.19	0.00	
21+00.00	100.00	46.30	39.25	0.00	0.30	145.37	1.11	
22+00.00	100.00	32.20	31.70	0.60	0.45	117.41	1.67	
23+00.00	100.00	31.20	37.45	0.30	0.15	138.70	0.56	
24+00.00	100.00	43.70		0.00		591.67	3.33	
TOTAL THIS SHEET							1,690.74	34.44
GRAND TOTAL							18,550.02	1,207.05

SDPS
Houston Storm Drainage Program Support

PGAL
3133 BROADWAY, SUITE 200
Houston, Texas 77042
Phone (713) 622-1444
Fax (713) 960-9333

SURVEYED BY: LANDTECH
P-5516

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING
FISHER PROPOSED CROSS SECTIONS

SHEET 3 OF 4

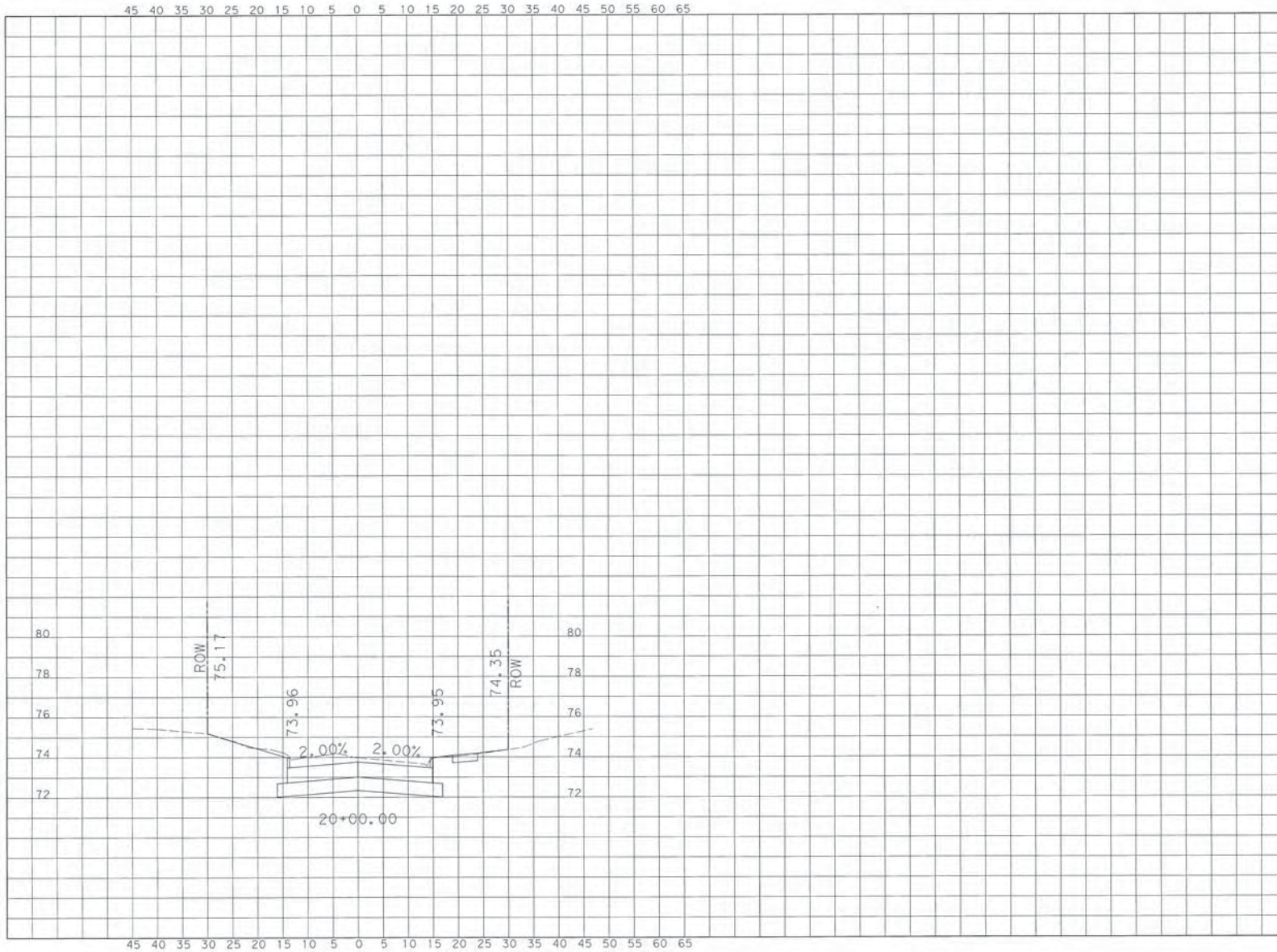
WBS NUMBER
M-000285-0001-4

DRAWING SCALE
HORIZ. 1"=20' VERT. 1"=5'

CITY OF HOUSTON PM
JEFFREY T. HALL, P.E.
DATE SHEET NO.
1 327 OF 385

NO.	DATE	REVISIONS

DATE: 01/28/2015 4:44:46 PM
 A:\020945-240-0001-DIVISION\ASD\2015\01\28\Drawings\Garden Oaks\Drawings\Sheet 2.dwg



STATION	DISTANCE LEFT	EA	QUIT (SF)	EA	FILL (SF)	EA	QUIT (SF)	EA	FILL (CY)
19+00.00			36.70		1.50				
20+00.00	100.00		35.20		0.30				
TOTAL SHEET									129.44
TOTAL SUE BARNETT									33.49
GRAND TOTAL									1,193.07



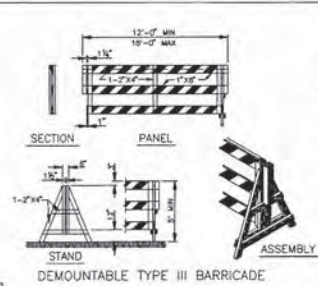
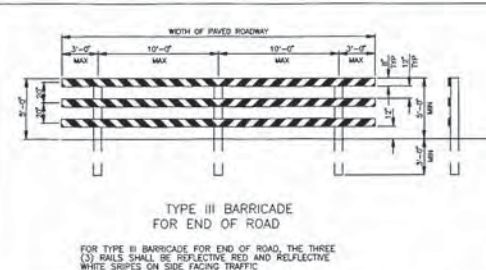
SUPERVISED BY: LANDTECH
 P.E. NO. 11-01316

CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING
 SUE BARNETT PROPOSED CROSS SECTIONS
 SHEET 2 OF 2

WBS NUMBER: M-000285-0001-4
 DRAWING SCALE: HORIZ. 1"=20' VERT. 1"=5'
 CITY OF HOUSTON PM: JEFFREY T. HALL, P.E.
 DATE: SHEET NO.: 330 OF 385





BARRICADE NOTES

THE MOST RECENT EDITION OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, AND ITS REVISIONS, SHALL GOVERN THE CONSTRUCTION AND USE OF ALL ITEMS HEREIN DESCRIBED.

CHANNELIZATION DEVICES OTHER THAN BARRICADES SHOULD NORMALLY BE USED FOR CHANNELIZATION PURPOSES.

BARRICADES SHOULD NORMALLY BE PLACED PERPENDICULAR TO THE TRAFFIC FLOW. OTHER CHANNELIZATION DEVICES, SUCH AS DRUMS, VERTICAL PANELS OR PORTABLE BARRIERS, SHOULD BE USED WHERE NEEDED TO SEPARATE TRAFFIC FROM THE WORK AREA. IN ALL CASES, THE BARRICADES SHOULD BE SO LOCATED AS TO MOST ADVANTAGEOUSLY MARK AND DIRECT TRAFFIC.

BARRICADES MAY BE DESIGNED AND CONSTRUCTED FROM WOOD OR ANY OTHER SUITABLE MATERIAL IN A MANNER APPROVED BY THE DEPARTMENT OF TRAFFIC AND TRANSPORTATION. THE CONSTRUCTION DETAILS SHOWN HEREON ARE TYPICAL AND ARE SUGGESTED DETAILS FOR WOOD SUPPORT SYSTEMS FOR BARRICADES. THE DETAILS OF RAIL WIDTH AND STRIPING NUMBER AND SPACING OF RAILS, MINIMUM LENGTH AND HEIGHT (ABOVE PAVEMENT) OF RAILS MUST BE ADHERED TO WHEN ALTERNATE DESIGNS ARE USED.

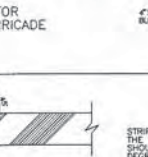
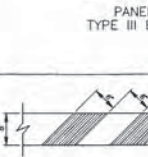
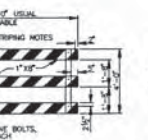
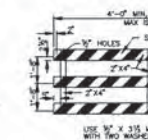
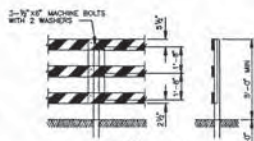
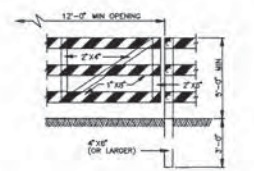
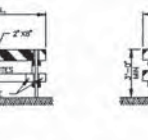
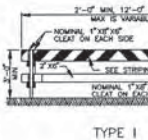
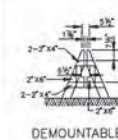
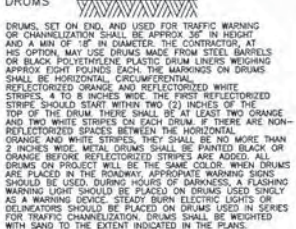
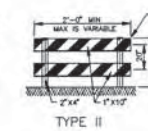
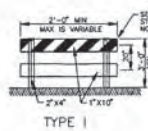
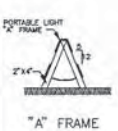
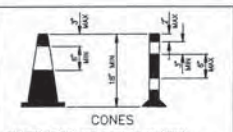
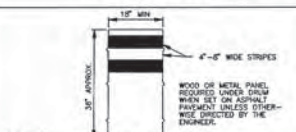
BARRICADES ARE TO BE CONSTRUCTED OF CLEAN SOUND MATERIAL. ALL SURFACES ABOVE GROUND, WHICH ARE NOT STRIPED, SHALL BE WHITE EXCEPT THE UNPAINTED GALVANIZED METAL OR ALUMINUM COMPONENTS MAY BE USED.

COMPONENTS MADE OF LUMBER SHALL BE PAINTED WITH A MINIMUM OF TWO COATS OF AN APPROVED BRAND OF WHITE PAINT TO SECURE THOROUGH COVERAGE AND A UNIFORM WHITE COLOR.

THE REFLECTORIZED WHITE AND REFLECTORIZED ORANGE (REFLECTORIZED RED) STRIPES FOR BARRICADES, DRUMS AND VERTICAL PANELS SHALL BE CONSTRUCTED OF "HIGH INTENSITY CHESTING" AND SHALL BE MAINTAINED TO MEET THE APPEARANCE, COLOR AND REFLECTIVITY REQUIREMENTS SET BY DOT.

THE CONTRACTOR SHALL MAINTAIN EACH BARRICADE IN A CLEAN AND GOOD CONDITION.

BARRICADES SHALL BE REMOVED UPON COMPLETION OF THE WORK AND/OR THE ELIMINATION OF THE HAZARD ON ANY SECTION.



CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
 ENGINEERING, CONSTRUCTION AND REAL ESTATE DIVISION

BARRICADE STANDARD
(NOT TO SCALE)

APPROVED BY: *[Signature]*
 CITY ENGINEER

APPROVED BY: *[Signature]*
 DIRECTOR OF PUBLIC WORKS AND ENGINEERING

EFF DATE: OCT-01-2002 DWG NO: 01580-01

SDPS
 Houston Storm Drainage Program Support

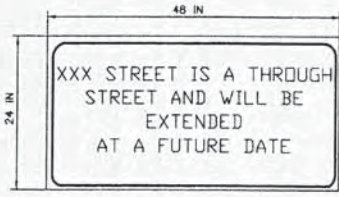
PGAL
 1819 956
 3131 BRANFORD, SUITE 200
 HOUSTON, TEXAS 77042
 PHONE (713) 822-1444
 FAX (713) 858-9333

CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

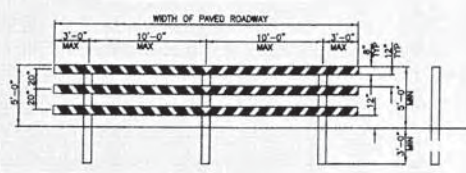
GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

GENERAL DETAILS SHEET 1 OF 3

WSS NUMBER: M-000285-0001-4
 DRAWING SCALE: NTS
 CITY OF HOUSTON PM: JEFFREY T. HALL, P.E.
 SHEET NO. 331 OF 385



TYPE III BARRICADE
TYPICAL END OF ROAD BARRICADE



TYPE III BARRICADE
FOR END OF ROAD

FOR TYPE III BARRICADE FOR END OF ROAD, THE THREE (3) RAILS SHALL BE REFLECTIVE RED AND REFLECTIVE WHITE STRIPES ON SIDE FACING TRAFFIC.

NOTES:

1. FONT SHALL BE HWY GOTHIC C, 4 INCH HEIGHT.
2. REFER TO STANDARD DETAIL NO. 01580-01 FOR TYPE III BARRICADE DETAIL.

CITY OF HOUSTON DEPARTMENT OF PUBLIC WORKS AND ENGINEERING	
END OF STREET SIGN (NOT TO SCALE)	
APPROVED BY: CITY ENGINEER	APPROVED BY: DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFF DATE: JULY-1-2009	DWG NO: 01580-02



3131 BRIDGEPARK, SUITE 200
HOUSTON, TEXAS 77042
PHONE (713) 622-1444
FAX (713) 568-9333

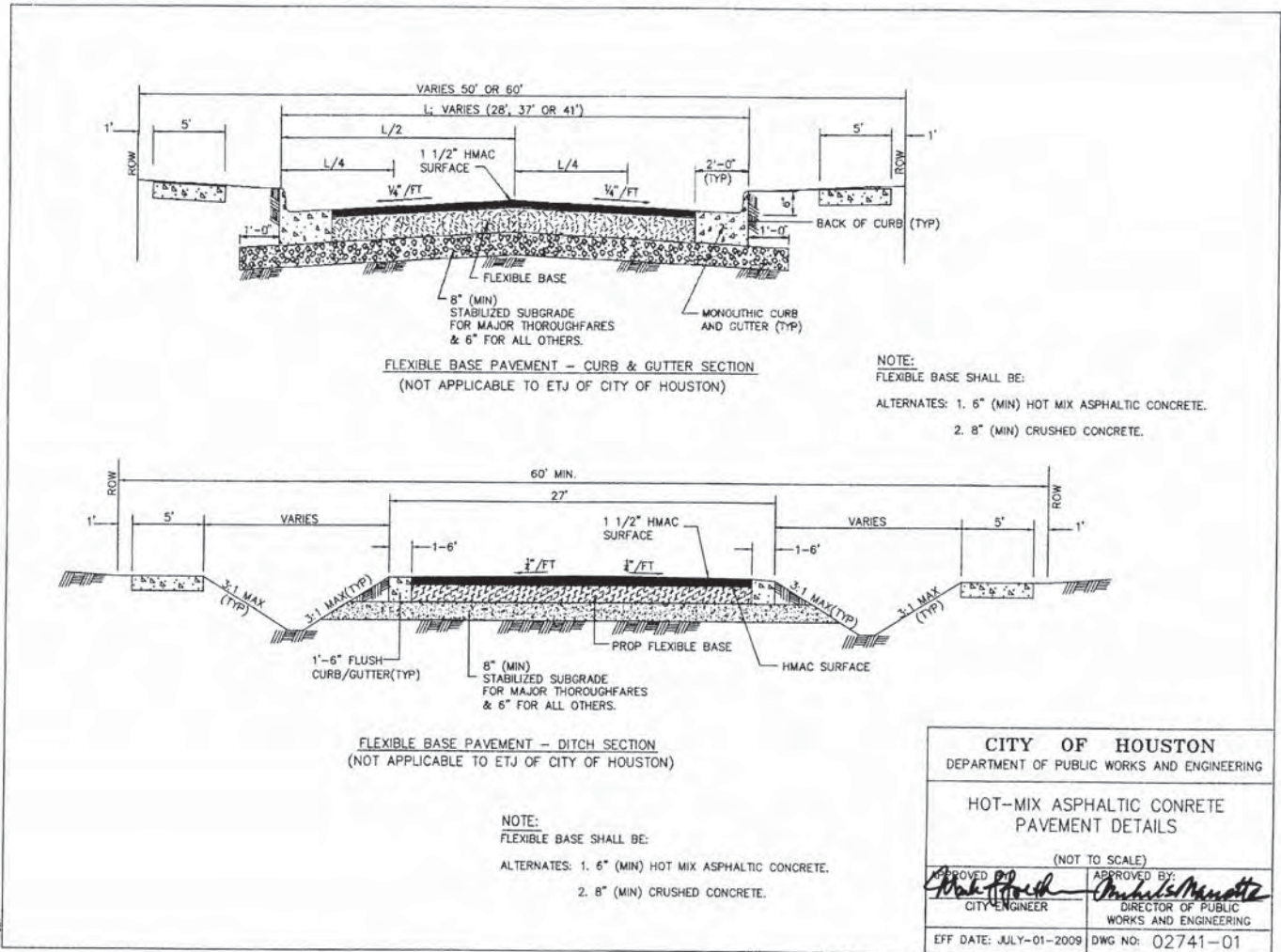
CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

GENERAL DETAILS
SHEET 2 OF 3

WBS NUMBER	M-000285-0001-4
DRAWING SCALE	NTS
CITY OF HOUSTON PM	JEFFREY T. HALL, P.E.
SHEET NO. 332 OF 385	





CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

HOT-MIX ASPHALTIC CONCRETE PAVEMENT DETAILS
(NOT TO SCALE)

APPROVED BY: *[Signature]*
CITY ENGINEER

APPROVED BY: *[Signature]*
DIRECTOR OF PUBLIC WORKS AND ENGINEERING

EFF DATE: JULY-01-2009 DWG NO: 02741-01



PGAL
3121 BIRDAWAY, SUITE 200
HOUSTON, TEXAS 77042
PHONE (713) 422-1444
FAX (713) 968-9333



CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

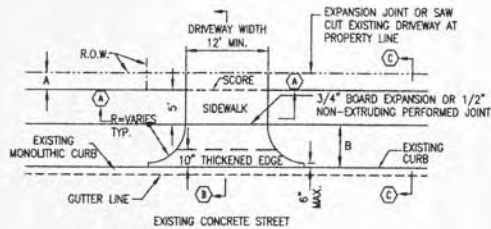
GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

PAVING DETAILS
SHEET 3 OF 16

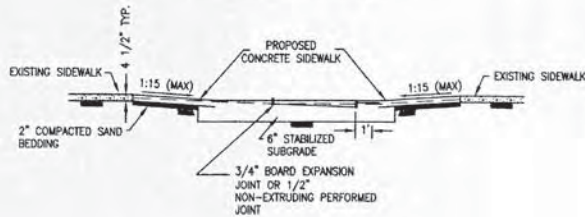
WBS NUMBER
M-000285-0001-4
DRAWING SCALE
NTS
CITY OF HOUSTON PW
JEFFREY T. HALL, P.E.
SHEET NO. 336 OF 385



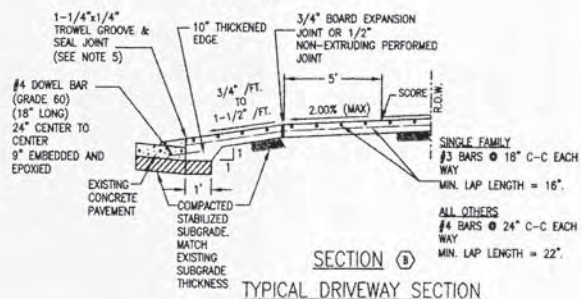
DATE: 01/11/2009 4:50:07 PM
A:\M00285\CAD\0001_0001\DWG\CURB\H04L_DTL_PAV_01.dwg



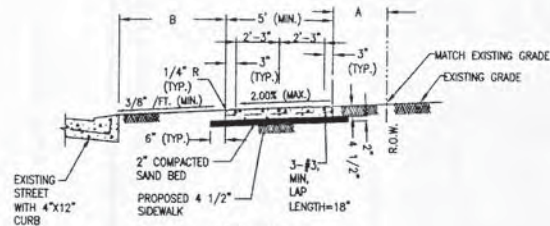
PLAN VIEW - DRIVEWAY



SECTION (A)
PROPOSED SIDEWALK THROUGH DRIVEWAY WITH EXCESSIVE GRADES
N.T.S.



SECTION (B)
TYPICAL DRIVEWAY SECTION
N.T.S.



SECTION (C)
TYPICAL SIDEWALKS SECTION
N.T.S.

NOTES

1. IF AVAILABLE ROW IS NOT SUFFICIENT TO ACCOMMODATE A 5-FOOT SIDEWALK, ENGINEER SHALL OBTAIN A VARIANCE FROM THE CITY ENGINEER FOR A 4-FOOT WIDE SIDEWALK.
2. DRIVEWAYS SHALL BE 6" THICK FOR SINGLE FAMILY
3. DRIVEWAYS AND SIDEWALKS SHALL BE CONSTRUCTED WITH PORTLAND CEMENT CONCRETE AND INCLUDE 5 1/2 SACKS OF CEMENT PER CUBIC YARD OF CONCRETE.
4. THE OUTER DOWEL BARS ARE TO BE LOCATED 12" FROM END OF PROPOSED EDGE OF DRIVEWAY RETURN. EXTEND DOWEL 3" INCHES INTO PROPOSED DRIVEWAY AND BEND REMAINING BAR TO EXTEND TO RADIUS RETURN BOTH SIDES.
5. TROWEL GROOVE SEALANT SHALL BE LOW MODULUS SILICONE OR POLYURETHANE SEALANT.
6. EXPANSION & CONSTRUCTION JOINTS ALONG SIDEWALK SHALL BE ACCORDING TO DRAWING No. 02752-02.
7. REFER CHAPTER 10 DESIGN REQUIREMENTS FOR A AND B.

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

DRIVEWAY / LOCAL RESIDENTIAL STREETS

(NOT TO SCALE)

APPROVED BY: *Mark Ford* CITY ENGINEER
APPROVED BY: *Michael Monte* DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFF DATE: JULY-01-2009 DWG NO: 02754-01A



3131 BRANIFF, SUITE 200
HOUSTON, TEXAS 77002
PHONE (713) 623-1444
FAX (713) 988-9333



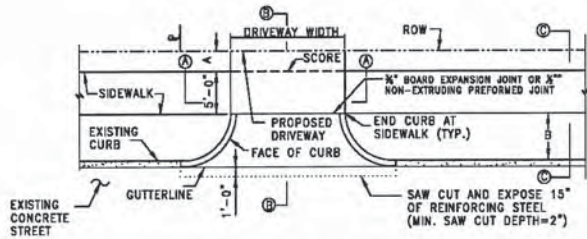
CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

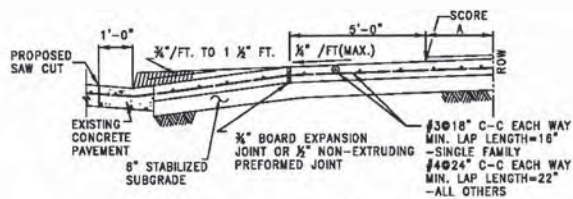
PAVING DETAILS
SHEET 5 OF 16

WBS NUMBER
M-000285-0001-4
DRAWING SCALE
NTS
CITY OF HOUSTON PM
JEFFREY T. HALL, P.E.
SHEET NO. 338 OF 385

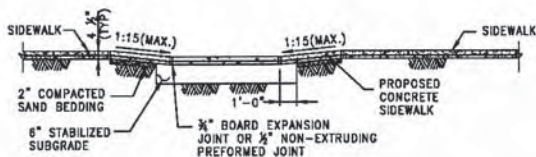




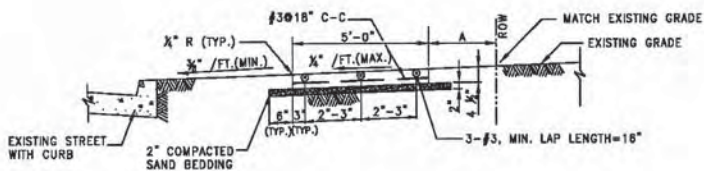
PLAN VIEW - DRIVEWAY
NTS



SECTION (B)
TYPICAL DRIVEWAY SECTION
NTS



SECTION (A)
PROPOSED SIDEWALK THROUGH DRIVEWAY WITH EXCESSIVE ELEVATION DIFFERENCE WITH EXISTING SIDEWALK
NTS



SECTION (C)
TYPICAL SIDEWALK SECTION
NTS

NOTES

- IF AVAILABLE ROW IS NOT SUFFICIENT TO ACCOMMODATE A 5- FEET SIDEWALK, ENGINEER SHALL OBTAIN A VARIANCE FROM THE CITY ENGINEER FOR A 4- FEET WIDE SIDEWALK.
- DRIVEWAYS SHALL BE 6" THICK FOR SINGLE FAMILY USE AND 7" THICK FOR ALL OTHERS (I.E. COMMERCIAL, INDUSTRIAL, ETC.)
- DRIVEWAYS AND SIDEWALKS SHALL BE CONSTRUCTED WITH PORTLAND CEMENT CONCRETE AND INCLUDE 5- 1/2 SACKS OF CEMENT PER CUBIC YARD OF CONCRETE.
- 6X6-W2.9 X W2.9 WELDED WIRE FABRIC MAY BE USED IN LIEU OF THE REINFORCING STEEL.
- EXPANSION & CONSTRUCTION JOINTS ALONG SIDEWALKS SHALL BE ACCORDING TO DRAWING NO. 02752-02.
- REFER CHAPTER 10 DESIGN REQUIREMENTS FOR A AND B.

CITY OF HOUSTON DEPARTMENT OF PUBLIC WORKS AND ENGINEERING	
DRIVEWAY DETAIL WITH 6" CURBED STREETS (NOT TO SCALE)	
APPROVED BY: <i>Alan H. H. H.</i> CITY ENGINEER	APPROVED BY: <i>Michael Mascetta</i> DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFF DATE: JULY-01-2009	DWG NO: 02754-01B



CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

PAVING DETAILS
SHEET 6 OF 16

WBS NUMBER	M-000285-0001-4
DRAWING SCALE	NTS
CITY OF HOUSTON PM	JEFFREY T. HALL, P.E.
SHEET NO.	339 OF 385

DATE: 01/27/09 4:03:02 PM P:\0000945-02\0800-DRAWING\02754-01B.DWG

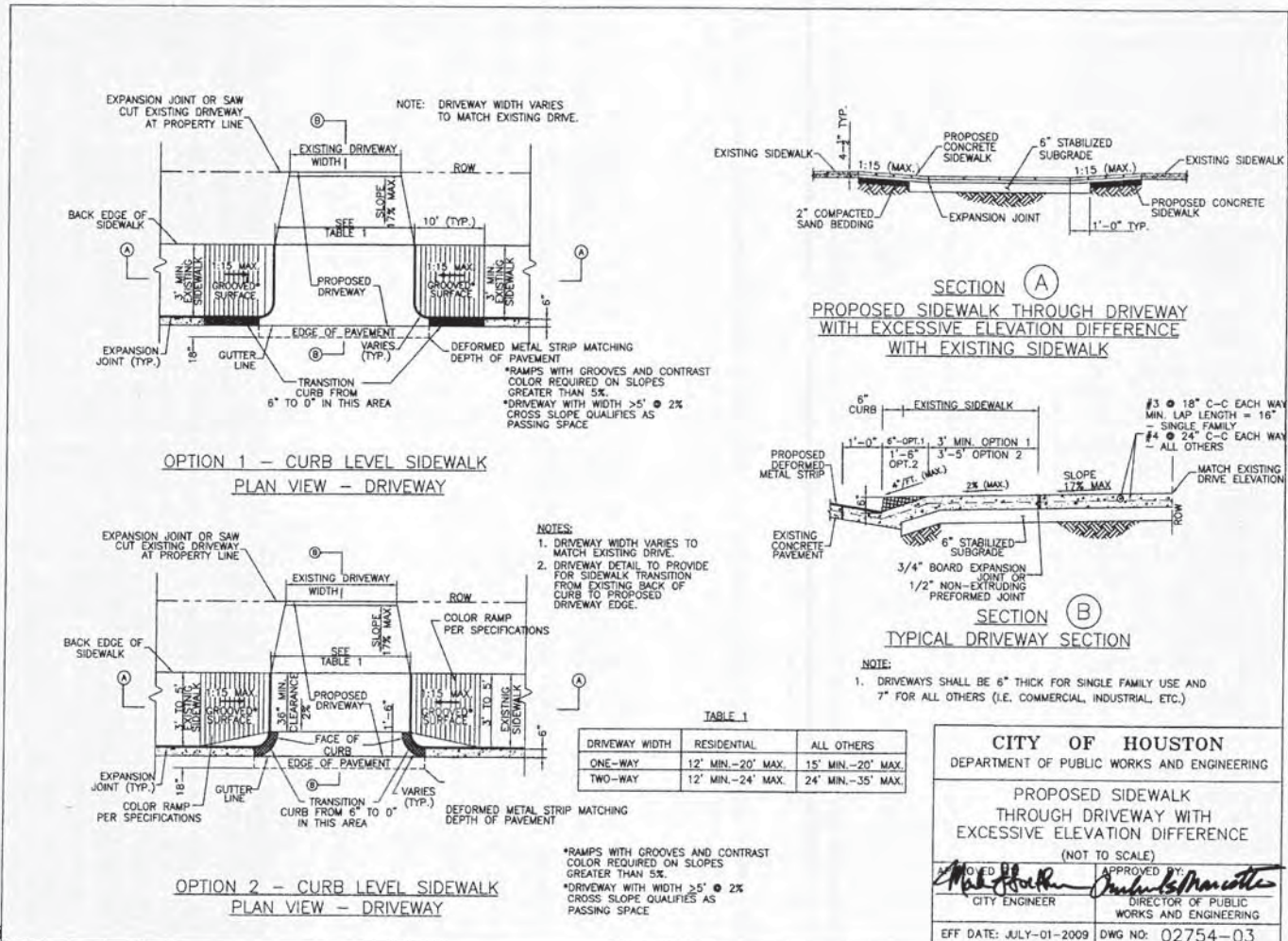


TABLE 1

DRIVEWAY WIDTH	RESIDENTIAL	ALL OTHERS
ONE-WAY	12' MIN. - 20' MAX.	15' MIN. - 20' MAX.
TWO-WAY	12' MIN. - 24' MAX.	24' MIN. - 35' MAX.

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

PROPOSED SIDEWALK THROUGH DRIVEWAY WITH EXCESSIVE ELEVATION DIFFERENCE (NOT TO SCALE)

APPROVED BY: *Max Walker* CITY ENGINEER
APPROVED BY: *Christopher M. ...* DIRECTOR OF PUBLIC WORKS AND ENGINEERING

EFF DATE: JULY-01-2009 DWG NO: 02754-03

SDPS
Houston Storm Drainage Program Support

PGAL
3131 BRADDOCK, SUITE 200
HOUSTON, TEXAS 77042
PHONE (713) 822-1444
FAX (713) 968-9333

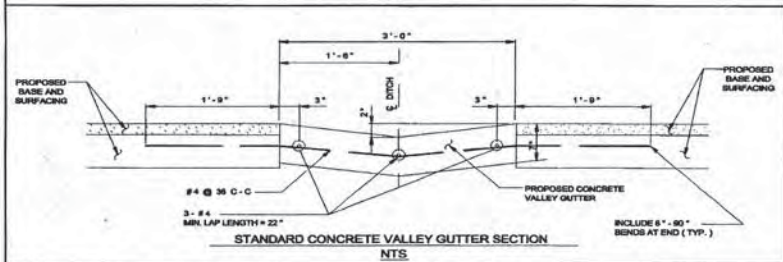
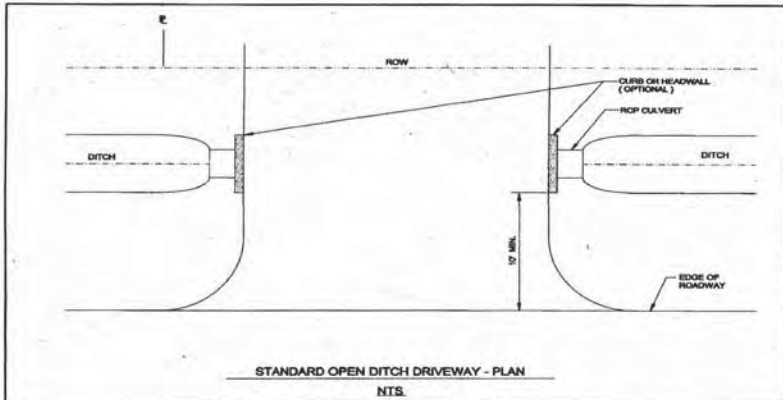
CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

PAVING DETAILS SHEET 7 OF 16

WBS NUMBER: M-000285-0001-4
DRAWING SCALE: NTS
CITY OF HOUSTON PM: JEFFREY T. HALL, P.E.
SHEET NO. 55630
SHEET NO. 539A OF 385

DATE: 6/1/2009 4:23:50 PM
DRAWN BY: J. HALL
CHECKED BY: J. HALL
DESIGNED BY: J. HALL



1. REINFORCED CONCRETE PIPE (RCP) CULVERTS AND CONCRETE VALLEY GUTTER GRADES SHALL BE SET BY CITY ENGINEER. PROFILE SHOWING THE PROPOSED AND EXISTING DITCH FLOWLINE WILL BE REQUIRED WHERE CONCRETE VALLEY GUTTERS ARE TO BE CONSTRUCTED IN LIEU OF CULVERTS.
2. CULVERT SIZE WILL BE APPROVED BY CITY ENGINEER WITH 24" DIAMETER MINIMUM.
3. SPACING OF TYPE "D" OR "D-1" INLETS SHALL BE DETERMINED BY CITY ENGINEER. SEE DRAWING NO. 02832-07 FOR TYPE "D" OR DRAWING NO. 02832-08 FOR TYPE "D-1".
4. DRIVEWAY MAY BE CONCRETE, ASPHALT OR ANY OTHER MATERIAL WHICH WILL NOT PERMIT WIND OR WATERBORNE EROSION.
5. A 3-FOOT CONCRETE VALLEY GUTTER SECTION SHALL BE CONSTRUCTED THROUGH THE PROPOSED DRIVEWAY WHERE THE CITY ENGINEER DETERMINES THE INSTALLATION OF DITCH CULVERTS TO BE IMPRACTICAL DUE TO INSUFFICIENT DEPTH. THE VALLEY GUTTER SECTION WILL BE CONSTRUCTED OF 5-1/2 SACK CEMENT PER CUBIC YARD OF CONCRETE.

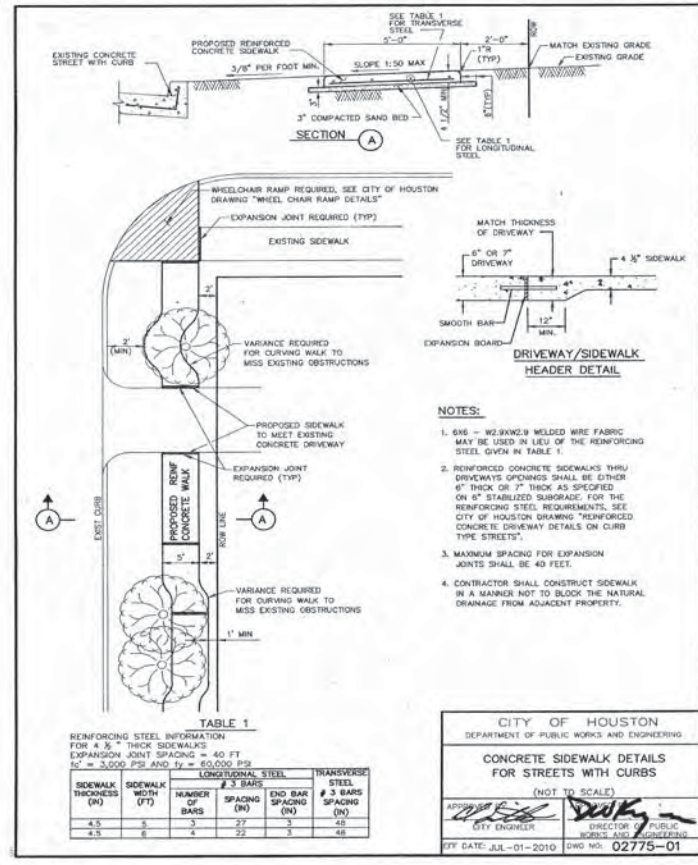
CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

DRIVEWAYS WITH CULVERTS OR VALLEY GUTTERS ON OPEN DITCH TYPE STREETS
(NOT TO SCALE)

APPROVED BY: [Signature] CITY ENGINEER
APPROVED BY: [Signature] DIRECTOR OF PUBLIC WORKS AND ENGINEERING

EFF DATE: OCT-01-2008 DWG NO: 02754-02

DRIVEWAYS WITH CULVERTS OR VALLEY GUTTERS ON OPEN DITCH TYPE STREETS 1
N.T.S.



CONCRETE SIDEWALK DETAILS FOR STREETS WITH CURBS 1
N.T.S.

SDPS
Houston Storm Drainage Program Support

PGAL
1201 F-2942
3131 BRIMHAWK, SUITE 200
HOUSTON, TEXAS 77042
PHONE (713) 822-1444
FAX (713) 968-9333

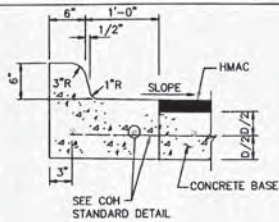
CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

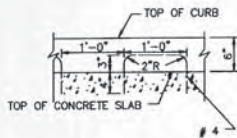
PAVING DETAILS SHEET 9 OF 16

WBS NUMBER: M-000285-0001-4
DRAWING SCALE: NTS
CITY OF HOUSTON PW
JEFFREY T. HALL, P.E.
SHEET NO. 341 OF 385

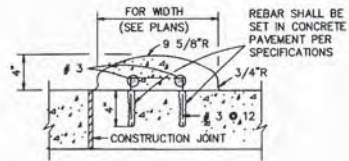
DATE: 04/1/2008 4:52:05 PM
DRAWING: C:\DWG\02832-02.DWG



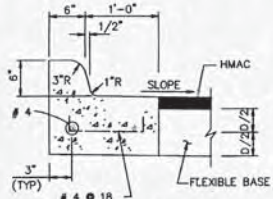
ESPLANADE CURB CONNECTED TO CONCRETE BASE



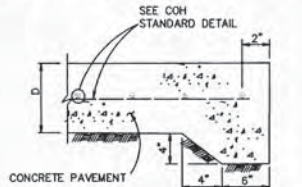
ALTERNATE CONCRETE CURB REINFORCEMENT



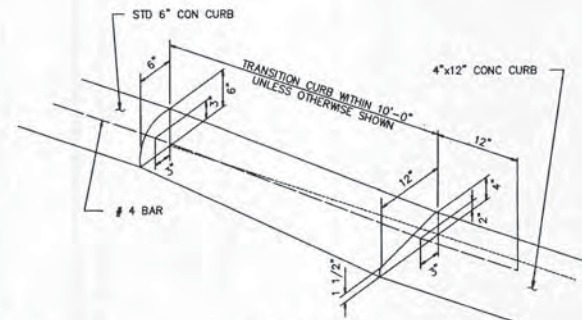
MOUNTABLE CURB



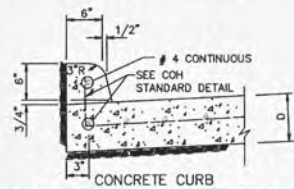
ESPLANADE CURB CONNECTED TO FLEXIBLE BASE



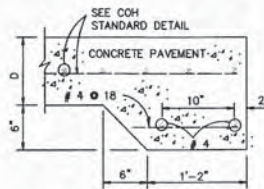
STANDARD CONCRETE PAVING HEADER



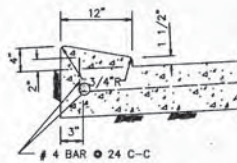
CURB TRANSITION



CONCRETE CURB

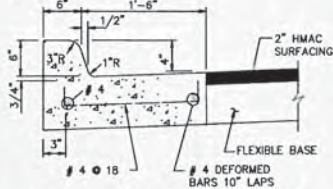


STANDARD RAILROAD HEADER

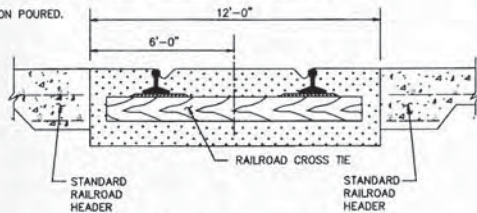


4-INCH x 12-INCH MONOLITHIC CURB

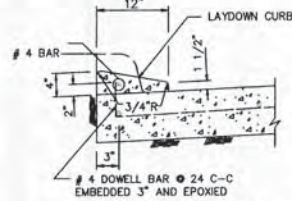
WHEN CONCRETE CURB IS TO BE PLACED EXISTING CONCRETE USE BASE #4 18x10\"/>



MONOLITHIC CURB AND GUTTER



STANDARD RAILROAD CROSSING - SINGLE TRACK



4-INCH x 12-INCH TRANSITION CURB

4"x12" MONOLITHIC AND TRANSITION CURB NOTES:

- 6-INCH CONCRETE CURB TO BE CONSTRUCTED ON ALL ESPLANADES, ISLANDS NON-RESIDENTIAL STREETS, AND RESIDENTIAL STREETS.
- TRANSITIONS FROM 6-INCH CONCRETE CURB TO 4-INCH x 12-INCH CONCRETE CURB TO BE ACCOMPLISHED WITHIN 10 FEET, UNLESS OTHERWISE SHOWN. IF THIS 10-FOOT TRANSITION CURB IS NOT POURED MONOLITHICALLY WITH THE PAVEMENT, THEN REINFORCING STEEL AS SHOWN IN "4-INCH x 12-INCH TRANSITION CURB" IS TO BE INSTALLED.

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
ENGINEERING, CONSTRUCTION AND REAL ESTATE DIVISION

CURB, CURB AND GUTTER AND HEADER DETAILS

(NOT TO SCALE)

APPROVED BY: *Chris Hall* CITY ENGINEER
APPROVED BY: *Andrew P. ...* DIRECTOR OF PUBLIC WORKS AND ENGINEERING

EFF DATE: JULY-01-2009 DWG NO: 02771-01

SDPS
Houston Storm Drainage Program Support

PGAL
3131 BRANFARK, SUITE 200
HOUSTON, TEXAS 77042
PHONE (713) 852-1844
FAX (713) 948-9333

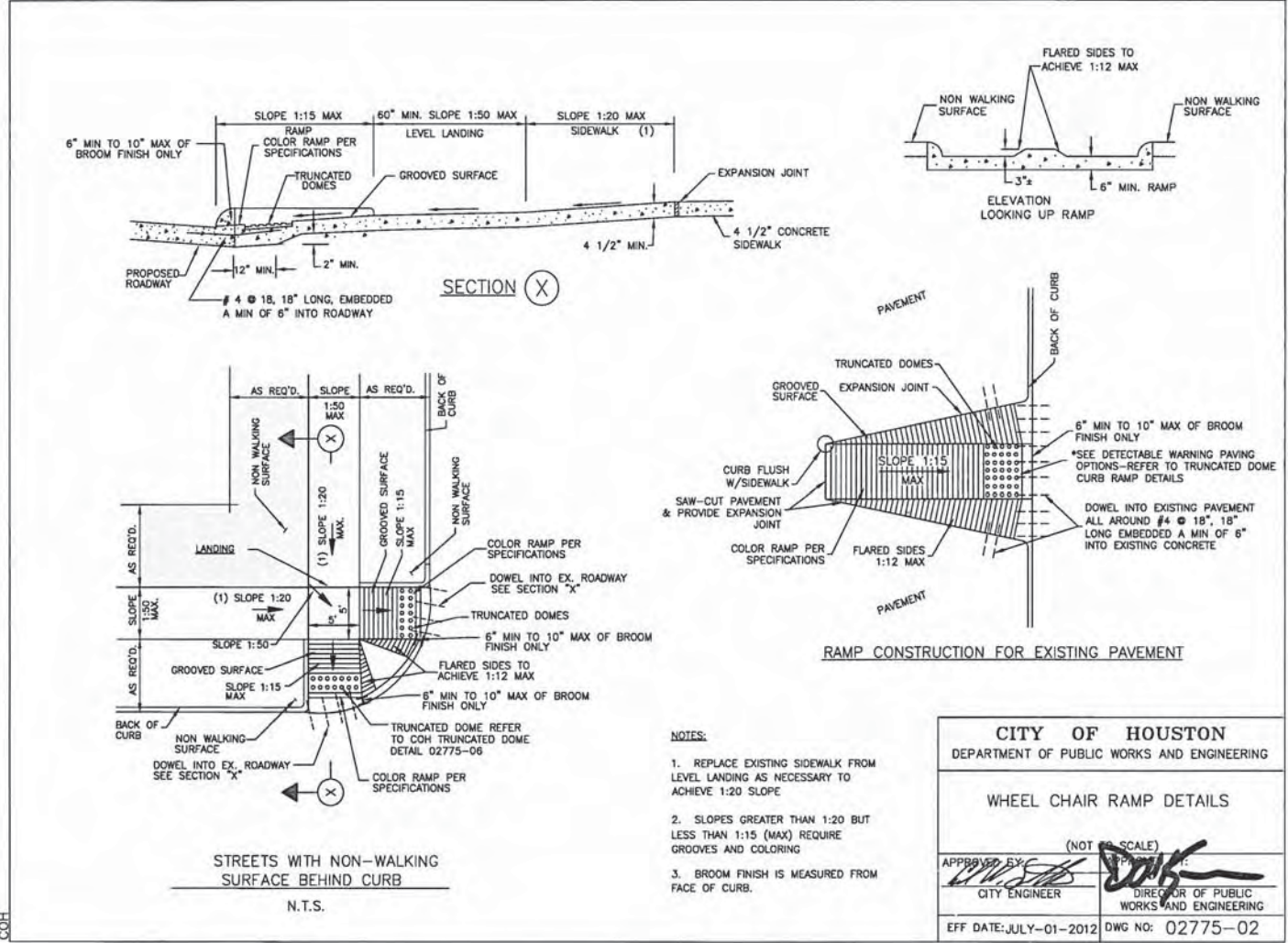
CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

PAVING DETAILS SHEET 10 OF 16

WBS NUMBER: M-000285-0001-4
DRAWING SCALE: NTS
CITY OF HOUSTON PW
JEFFREY T. HALL, P.E.
SHEET NO. 342 OF 385

DATE: 01/17/09 4:56:56 PM
PROJECT: 04010000 - DOWNTOWN/DAL/PL/PL/01



- NOTES:**
1. REPLACE EXISTING SIDEWALK FROM LEVEL LANDING AS NECESSARY TO ACHIEVE 1:20 SLOPE
 2. SLOPES GREATER THAN 1:20 BUT LESS THAN 1:15 (MAX) REQUIRE GROOVES AND COLORING
 3. BROOM FINISH IS MEASURED FROM FACE OF CURB.

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

WHEEL CHAIR RAMP DETAILS

(NOT TO SCALE)

APPROVED BY: *[Signature]* CITY ENGINEER

APPROVED BY: *[Signature]* DIRECTOR OF PUBLIC WORKS AND ENGINEERING

EFF DATE: JULY-01-2012 DWG NO: 02775-02

SDPS
Houston Storm Drainage Program Support

PGAL
3151 SHIRAZIAN, SUITE 200
HOUSTON, TEXAS 77042
PHONE (713) 622-1444
FAX (713) 968-9333

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

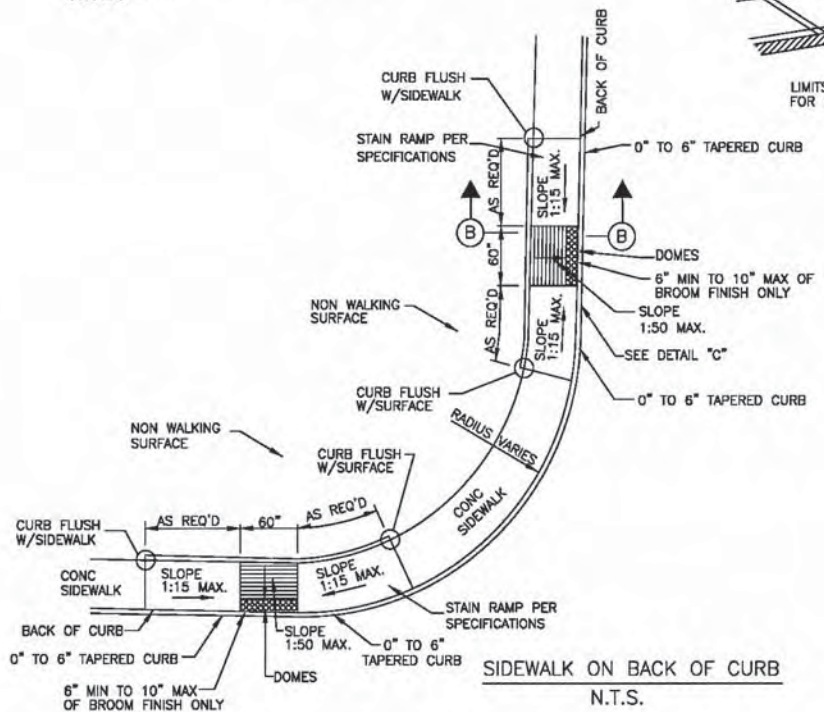
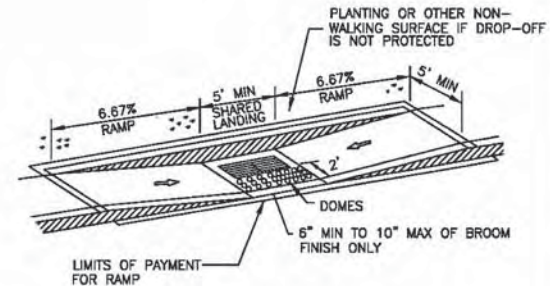
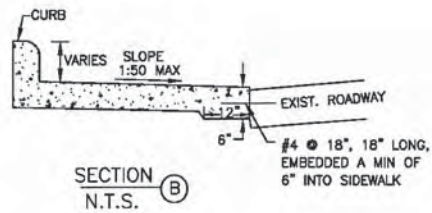
GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

PAVING DETAILS SHEET 11 OF 16

WBS NUMBER: M-000285-0001-4
DRAWING SCALE: NTS
CITY OF HOUSTON PM: JEFFREY T. HALL, P. E.
SHEET NO. 343 OF 385

DATE: 01/12/05 4:56:29 PM
DRAWING: C:\000000\000000\DWG\0001094_0111.dwg

COH



DETAIL "C"

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

PARALLEL CURB RAMP

(NOT TO SCALE)

APPROVED BY: *[Signature]*

[Signature] CITY ENGINEER DIRECTOR OF PUBLIC WORKS AND ENGINEERING

EFF DATE: JULY-01-2012 DWG NO: 02775-03

SDPS
Houston Storm Drainage Program Support

PGAL
TYPE REC NO. P-2742
3131 BROADWAY, SUITE 200
Houston, Texas 77042
Phone (713) 822-1444
Fax (713) 968-9333

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

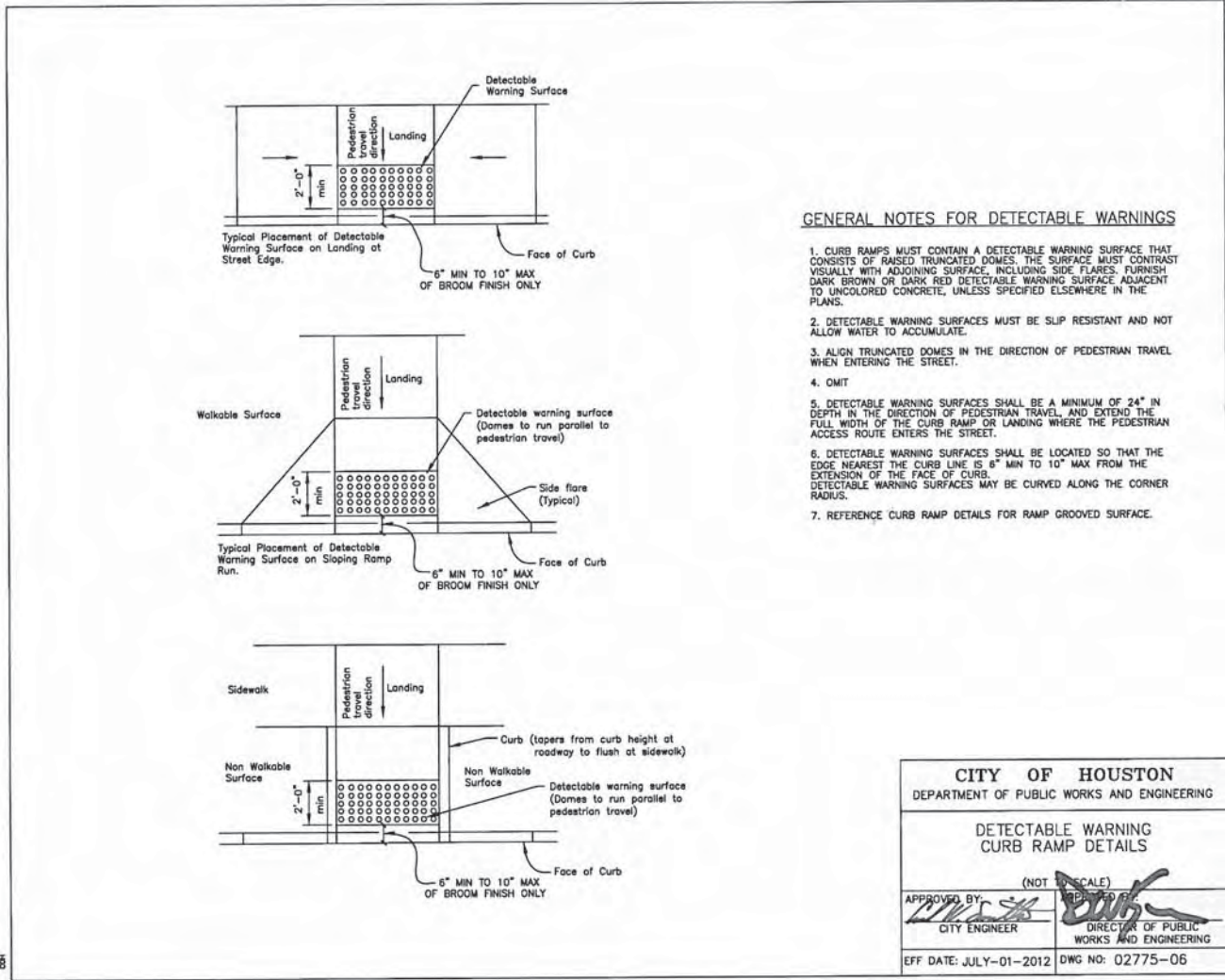
PAVING DETAILS SHEET 12 OF 16

WBS NUMBER: M-000285-0001-4
DRAWING SCALE: NTS
CITY OF HOUSTON PM: JEFFREY T. HALL, P. E.
SHEET NO. 344 OF 385

55630

DATE: 06/12/05 4:07:02 PM
R:\000005\02\0000_DRAIN\000005\02\0000\02775_03.dwg

DATE: 01/12/2015 4:29:36 PM
 A:\0000045\045\0000 - D05\DWG\1024\DTL_PAW_13.dwg



GENERAL NOTES FOR DETECTABLE WARNINGS

1. CURB RAMPS MUST CONTAIN A DETECTABLE WARNING SURFACE THAT CONSISTS OF RAISED TRUNCATED DOMES. THE SURFACE MUST CONTRAST VISUALLY WITH ADJOINING SURFACE, INCLUDING SIDE FLARES. FURNISH DARK BROWN OR DARK RED DETECTABLE WARNING SURFACE ADJACENT TO UNCOLORED CONCRETE, UNLESS SPECIFIED ELSEWHERE IN THE PLANS.
2. DETECTABLE WARNING SURFACES MUST BE SLIP RESISTANT AND NOT ALLOW WATER TO ACCUMULATE.
3. ALIGN TRUNCATED DOMES IN THE DIRECTION OF PEDESTRIAN TRAVEL WHEN ENTERING THE STREET.
4. OMIT
5. DETECTABLE WARNING SURFACES SHALL BE A MINIMUM OF 24" IN DEPTH IN THE DIRECTION OF PEDESTRIAN TRAVEL, AND EXTEND THE FULL WIDTH OF THE CURB RAMP OR LANDING WHERE THE PEDESTRIAN ACCESS ROUTE ENTERS THE STREET.
6. DETECTABLE WARNING SURFACES SHALL BE LOCATED SO THAT THE EDGE NEAREST THE CURB LINE IS 6" MIN TO 10" MAX FROM THE EXTENSION OF THE FACE OF CURB. DETECTABLE WARNING SURFACES MAY BE CURVED ALONG THE CORNER RADIUS.
7. REFERENCE CURB RAMP DETAILS FOR RAMP GROOVED SURFACE.

CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

DETECTABLE WARNING CURB RAMP DETAILS

(NOT TO SCALE)

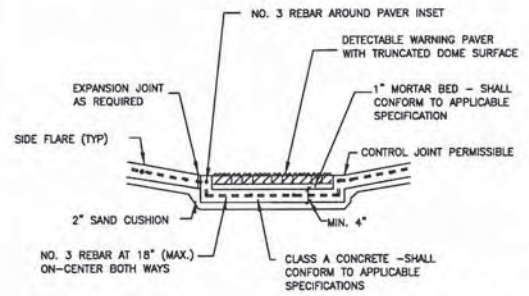
APPROVED BY: CITY ENGINEER	APPROVED BY: DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFF DATE: JULY-01-2012 DWG NO: 02775-06	

3131 BRANNPARK, SUITE 200
 HOUSTON, TEXAS 77042
 PHONE (713) 852-1444
 FAX (713) 988-9333

SURVEYED BY: LANGTECH
 FB NO.: P-25176

CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
 GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING
 PAVING DETAILS
 SHEET 13 OF 16

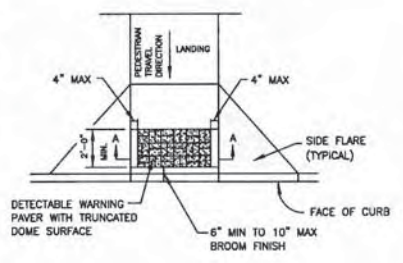
WBS NUMBER	
M-000285-0001-4	
DRAWING SCALE	
NTS	55630
CITY OF HOUSTON PW	
JEFFREY T. HALL, P.E.	
SHEET NO. 345 OF 385	



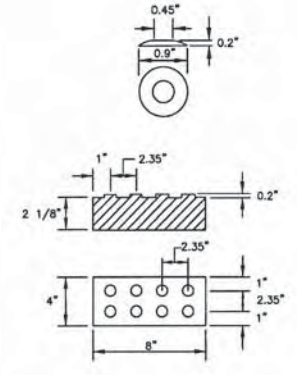
SECTION (A)

GENERAL NOTES (PAVERS)

1. FURNISH DETECTABLE WARNING PAVES UNITS MEETING ALL REQUIREMENTS OF ASTM C-936, C-33. LAY IN A TWO BY TWO UNIT BASKET WEAVE PATTERN OR AS DIRECTED.
2. LAY FULL-SIZE UNITS FIRST FOLLOWED BY CLOSURE UNITS CONSISTING OF AT LEAST 25 PERCENT OF A FULL UNIT. CUT DETECTABLE WARNING PAVES UNITS USING A POWER SAW.

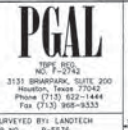


DETECTABLE WARNING PAVES (OPTION)



DETECTABLE WARNING PAVES

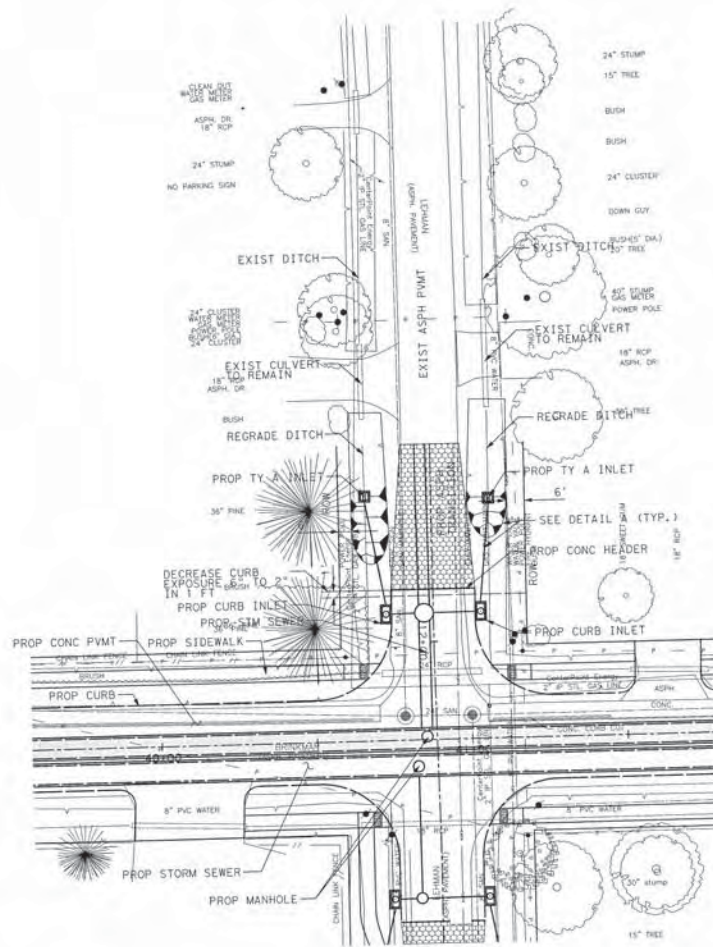
CITY OF HOUSTON DEPARTMENT OF PUBLIC WORKS AND ENGINEERING	
DETECTABLE WARNING PAVES (OPTION)	
(NOT TO SCALE)	
APPROVED BY: <i>[Signature]</i> CITY ENGINEER	APPROVED BY: <i>[Signature]</i> DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFF DATE: JULY-01-2012	DWG NO: 02775-07



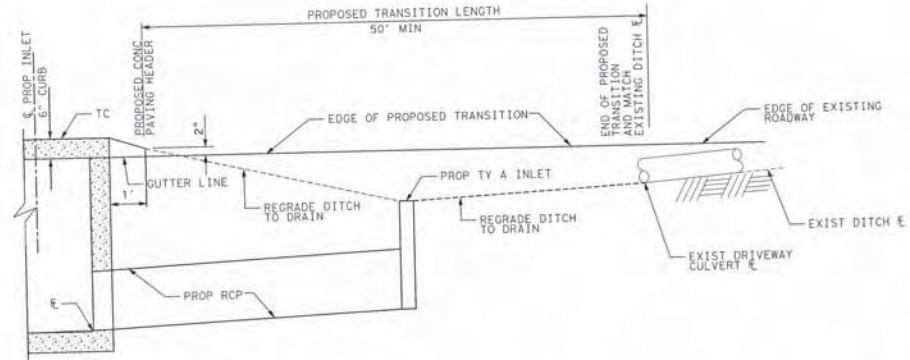
CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING
PAVING DETAILS
SHEET 14 OF 16

WBS NUMBER
M-000285-0001-4
DRAWING SCALE
NTS
CITY OF HOUSTON PM
JEFFREY T. HALL, P.E.
SHEET NO. 346 OF 385

5630







PLAN VIEW
N. T. S.

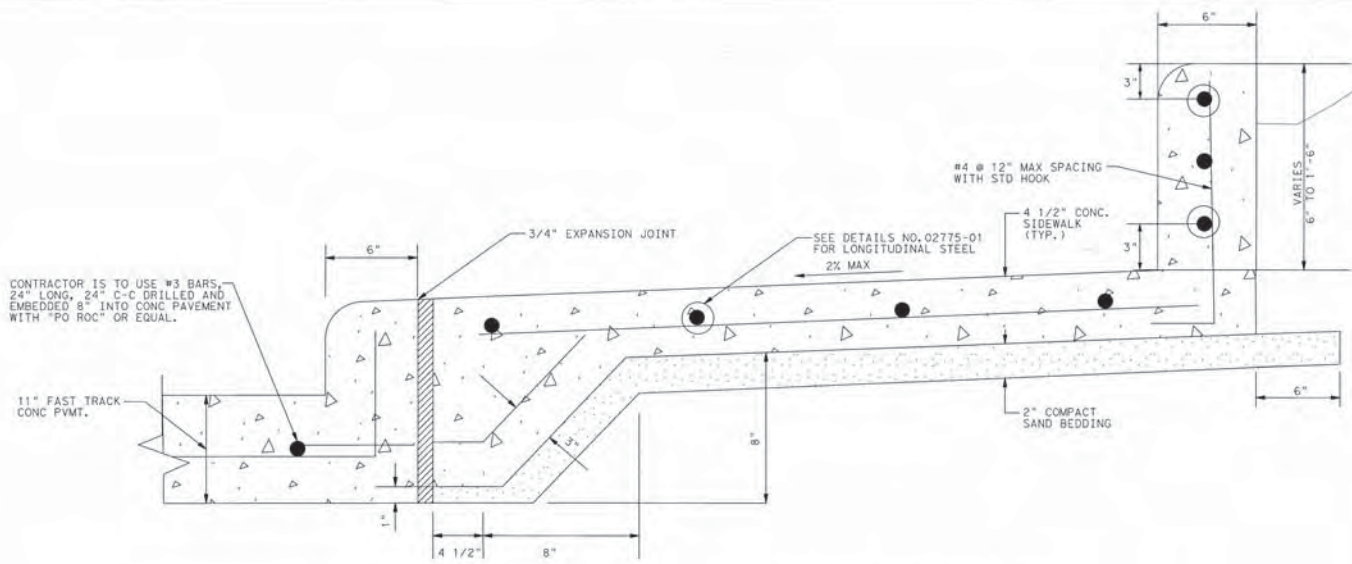


DETAIL A
N. T. S.

SIDE STREET DITCH RECEPTION
(REVISED CITY OF HOUSTON DETAIL NO. 02632-11)
N. T. S.

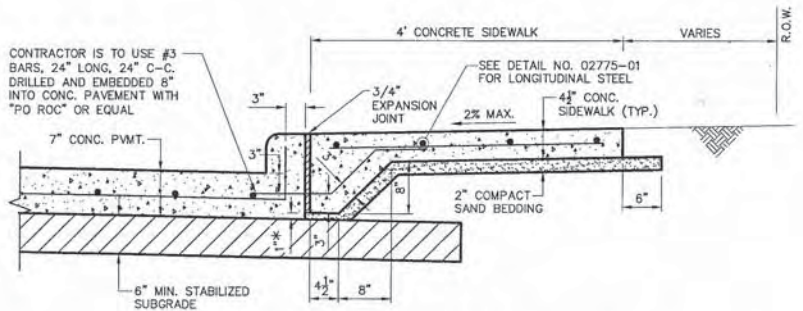
 <p>SDPS Houston Storm Drainage Program Support</p>	
 <p>PGAL 1815 N. 101st NO. P-2742 3131 BIRCHWOOD, SUITE 200 HOUSTON, TEXAS 77042 Phone: (713) 822-1444 Fax: (713) 968-9333</p>	
 <p>COSTAS C. LEONIDIS REGISTERED PROFESSIONAL ENGINEER No. 12512 Exp. 12/31/04 State of Texas Surveyed by: LANOTCH P-9516</p>	
<p>CITY OF HOUSTON DEPARTMENT OF PUBLIC WORKS AND ENGINEERING</p>	
<p>GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING</p>	
<p>PAVING DETAILS SHEET 15 OF 16</p>	
<p>WSS NUMBER M-000285-0001-4</p>	 <p>55504</p>
<p>DRAWING SCALE NTS</p>	
<p>CITY OF HOUSTON PM JEFFREY T. HALL, P.E.</p>	
<p>SHEET NO. 347 OF 385</p>	

DATE: 04/05/05 4:34 PM
PROJECT: 040500 DRAINAGE/DRM/JTL/PAN_05.00



SIDEWALK ON BACK OF CURB WITH TOE WALL DETAIL
N.T.S.

- NOTES:
1. SIDEWALK RETAINING WALL SHALL HAVE A 28 DAY COMPRESSIVE STRENGTH OF 3000 PSI WITH #4 VERTICAL REBAR @ 12" MAX SPACING.
 2. RETAINING WALL MAX HEIGHT IS 2-FT ABOVE TOP OF SIDEWALK. WALL HAS BEEN DESIGNED FOR A LATERAL SOIL LOAD OF 60-PCF PER IBC TABLE 1610.1 AND FULL WALL HEIGHT HYDROSTATIC LOAD. WEEP HOLES ARE NOT REQUIRED.
 3. WHERE TYING SIDEWALK RETAINING WALL INTO AN EXISTING RETAINING WALL, PROVIDE #4 DOWELS AT 12" MAX VERTICAL SPACING (2 MIN). DRILL AND BOND WITH HILTI HIT-RE 500 EPOXY ADHESIVE. EMBED DOWEL 4.5" INTO EXISTING CONCRETE AND PROJECT OUT 18" PROVIDE A SEALED JOINT AROUND WALL WITH AN APPROVED NO SAG SEALANT.



SIDEWALK ON BACK OF CURB DETAIL
N.T.S.

* NOTE: FOR 6" PAVING, SIDEWALK FOOTER WILL SET DIRECTLY ON TOP OF SUBGRADE.



CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

PAVING DETAILS
SHEET 16 OF 16

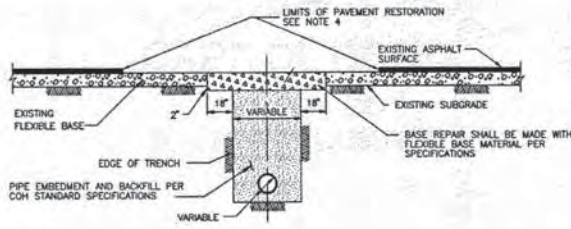
WBS NUMBER
M-000285-0001-4

DRAWING SCALE
NTS

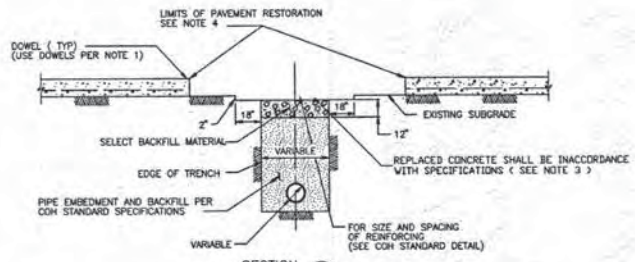
CITY OF HOUSTON PW

JEFFREY T. HALL, P.E.
SHEET NO. 348 OF 385

55630



SECTION A
REPAIR OF FLEXIBLE BASE PAVEMENT



SECTION B
REPAIR OF REINFORCED CONCRETE PAVEMENT

NOTE:

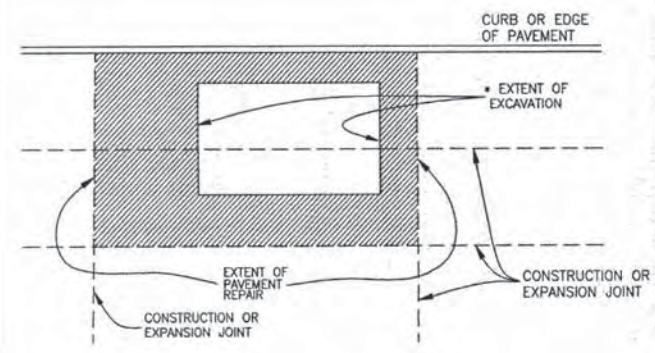
1. EXPOSE 15" OF REINFORCING STEEL AT PROPOSED SAWED JOINT. IF NO REINFORCING STEEL EXISTS, USE HORIZONTAL DOWELS. HORIZONTAL DOWELS SHALL BE # 6 BARS, 24" LONG, 24" C-C, DRILLED AND EMBEDDED 8" INTO THE CENTER OF THE EXISTING SLAB. WITH "PO ROC" OR EQUAL.
2. IF REINFORCED CONCRETE IS OVERLAYED WITH ASPHALT, REPLACE WITH 2" MIN HMAc SURFACING.
3. REFER TO STANDARD DETAIL 02751-01 FOR REINFORCING STEEL REQUIREMENTS
4. REFER TO STANDARD DETAIL 02951-01 FOR PAVEMENT RESTORATION LIMITS.

CITY OF HOUSTON DEPARTMENT OF PUBLIC WORKS AND ENGINEERING ENGINEERING, CONSTRUCTION AND REAL ESTATE DIVISION	
PAVEMENT REPAIR DETAILS FOR STREET CUTS (NOT TO SCALE)	
APPROVED BY: <i>[Signature]</i> CITY ENGINEER	APPROVED BY: <i>[Signature]</i> DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFF DATE: OCT-01-2002	DWG NO.: 02902-01

PAVEMENT REPAIR DETAILS FOR STREET CUTS
N.T.S. 1

CONCRETE PAVEMENT RESTORATION

AGE OF PAVEMENT
LESS THAN OR EQUAL TO 5 YEARS



NOTES:

1. EXTENT OF PAVEMENT REPAIR SHALL BE PERPENDICULAR AND PARALLEL TO TRAVEL WAY.
2. REPLACE ENTIRE PANEL WIDTH AND LENGTH TO NEAREST CONSTRUCTION OR EXPANSION JOINT BEYOND EDGE OF EXCAVATION.
3. SAW CUT AND EXPOSE 15" OF REINFORCING STEEL WITHIN EXISTING PAVEMENT. PROVIDE HORIZONTAL DOWELS (PER SPECIFICATION SECTION 02902-01) IF EXISTING REINFORCING IS BROKEN OFF.
4. REPLACE CURB WHEN ADJACENT LANE IS REPLACED.
5. MAINTAIN EXPANSION JOINTS AT EXISTING LOCATIONS UNLESS OTHERWISE DIRECTED BY CITY ENGINEER.
6. SPECIALTY PAVEMENTS (I.E. BRICK PAVERS) TO BE REPLACED WITH MATCHING PAVEMENT IN ALL CASES.
7. REPLACE PAVEMENT MARKINGS IN ACCORDANCE WITH CITY SPECIFICATIONS 02764 AND 02767.

* EXTENT OF EXCAVATION INCLUDES 18" OVERCUT AS SHOWN ON STANDARD DETAIL 02902-01.

CITY OF HOUSTON DEPARTMENT OF PUBLIC WORKS AND ENGINEERING ENGINEERING, CONSTRUCTION AND REAL ESTATE DIVISION	
Street Cut Pavement Replacement CONCRETE PAVEMENT LESS THAN 5 YRS IN AGE (NOT TO SCALE)	
APPROVED BY: <i>[Signature]</i> CITY ENGINEER	APPROVED BY: <i>[Signature]</i> DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFF DATE: JUNE 2002	DWG NO.: 02951-01

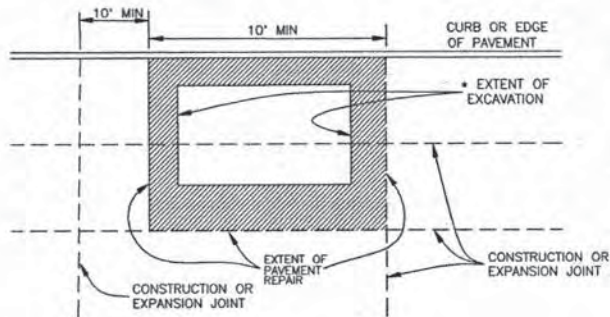
STREET CUT PAVEMENT REPLACEMENT: CONCRETE PAVEMENT LESS THAN 5 YEARS IN AGE
N.T.S. 1

DATE: 6/20/02 10:45 AM 10/20/02 10:45 AM 10/20/02 10:45 AM 10/20/02 10:45 AM 10/20/02 10:45 AM

SDPS Houston Storm Drainage Program Support	
PGAL INCORPORATED 3121 BRADPARK, SUITE 200 HOUSTON, TEXAS 77042 PHONE (713) 862-1444 FAX (713) 862-9333	
CITY OF HOUSTON DEPARTMENT OF PUBLIC WORKS AND ENGINEERING	
GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING	
STREET CUT DETAILS SHEET 1 OF 2	
WBS NUMBER M-000285-0001-4	
DRAWING SCALE N.T.S.	
CITY OF HOUSTON PM JEFFREY T. HALL, P.E. SHEET NO. 350 OF 385	

CONCRETE PAVEMENT RESTORATION

AGE OF PAVEMENT
GREATER THAN 5 YEARS



NOTES:

1. EXTENT OF PAVEMENT REPAIR SHALL BE PERPENDICULAR AND PARALLEL TO TRAVEL WAY.
2. WIDTH: REPLACE PANEL WIDTH TO NEAREST CONSTRUCTION OR EXPANSION JOINT BEYOND EDGE OF EXCAVATION.
3. LENGTH:
 - a. MINIMUM LENGTH OF PAVEMENT REPAIR ALONG TRAVEL WAY IS 10' FROM THE NEAREST JOINT.
 - b. IF EDGE OF EXCAVATION IS LESS THAN 10' FROM EXISTING CONSTRUCTION OR EXPANSION JOINT, REPLACE PAVEMENT TO EXISTING JOINT.
4. SAW CUT AND EXPOSE 15" OF REINFORCING STEEL AROUND EDGE OF PANEL REPLACEMENT. PROVIDE HORIZONTAL DOWELS (PER SPECIFICATION SECTION 02902-01) IF REINFORCING IS BROKEN OFF OR DOES NOT EXIST.
5. REPLACE CURB WHEN ADJACENT LANE IS REPLACED.
6. MAINTAIN EXPANSION JOINTS AT EXISTING LOCATIONS UNLESS OTHERWISE DIRECTED BY CITY ENGINEER.
7. SPECIALTY PAVEMENTS (I.E. BRICK PAVERS) TO BE REPLACED WITH MATCHING PAVEMENT IN ALL CASES.
8. REPLACE PAVEMENT MARKINGS IN ACCORDANCE WITH CITY SPECIFICATIONS 02764 AND 02767.

* EXTENT OF EXCAVATION INCLUDES 18" OVERCUT AS SHOWN ON STANDARD DETAIL 02902-01.

CITY OF HOUSTON DEPARTMENT OF PUBLIC WORKS AND ENGINEERING ENGINEERING, CONSTRUCTION AND REAL ESTATE GROUP	
Street Cut Pavement Replacement CONCRETE PAVEMENT OVER 5 YRS IN AGE (NOT TO SCALE)	
APPROVED BY: CITY ENGINEER	APPROVED BY: DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFF DATE: JUNE 2002	DWG NO: 02951-02

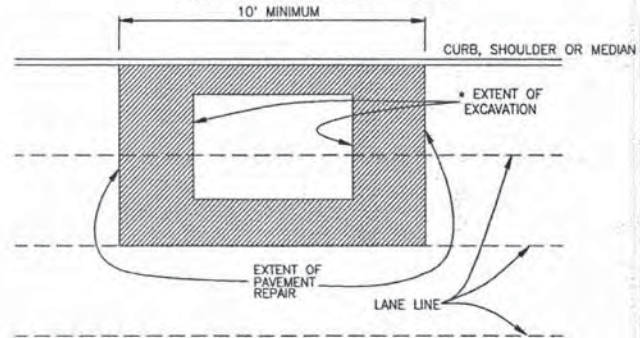
STREET CUT PAVEMENT REPLACEMENT: CONCRETE PAVEMENT OVER 5 YRS IN AGE

N.T.S.

1

ASPHALT PAVEMENT RESTORATION

FOR PAVEMENT OF ALL AGES



NOTES:

1. EXTENT OF PAVEMENT REPAIR SHALL BE PERPENDICULAR AND PARALLEL TO TRAVEL WAY.
2. **FLEXIBLE BASE:** REPLACE BASE TO SAME THICKNESS PLUS TWO INCHES (2") FOR EXTENT OF EXCAVATION. USE APPROVED BASE MATERIAL TYPE. *
3. **SURFACE COURSE:**
 - A. WIDTH: SURFACE MILL AND OVERLAY FULL WIDTH OF LANE(S) TO NEAREST LANE DIVIDER BEYOND EDGE OF EXCAVATION.
 - B. LENGTH: MINIMUM LENGTH OF SURFACE MILL ALONG TRAVEL WAY IS 10'.
 - C. REPLACE PAVEMENT MARKINGS IN ACCORDANCE WITH CITY SPECIFICATIONS 02764 & 02767.
4. REPLACE CURB WHEN ADJACENT LANE IS REPLACED.
5. MAINTAIN CONCRETE EXPANSION JOINTS AT EXISTING LOCATIONS UNLESS OTHERWISE APPROVED BY CITY ENGINEER.

ADDITIONAL REQUIREMENTS FOR ASPHALT OVERLAY ON CONCRETE PAVEMENT:

1. REPLACE CONCRETE FOR EXTENT OF EXCAVATION. REPLACE TO SAME THICKNESS PLUS TWO INCHES (2").
2. WIDTH: IF EXCAVATION EXTENDS MORE THAN HALF OF A LANE, REPLACE ENTIRE LANE OF CONCRETE. OTHERWISE USE STANDARD DETAIL 02902-01.
3. SAW CUT AND EXPOSE 15" OF REINFORCING STEEL AROUND EDGE OF CONCRETE REPLACEMENT. IF NO REINFORCING STEEL EXISTS, USE HORIZONTAL DOWELS PER SPECIFICATION SECTION 02902.

* EXTENT OF EXCAVATION INCLUDES 18" OVERCUT AS SHOWN ON STANDARD DETAIL 02902-01.

CITY OF HOUSTON DEPARTMENT OF PUBLIC WORKS AND ENGINEERING ENGINEERING, CONSTRUCTION AND REAL ESTATE GROUP	
Street Cut Pavement Replacement ASPHALT PAVEMENT FOR PAVEMENT OF ALL AGES (NOT TO SCALE)	
APPROVED BY: CITY ENGINEER	APPROVED BY: DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFF DATE: JUNE 2002	DWG NO: 02951-03

STREET CUT PAVEMENT REPLACEMENT: ASPHALT PAVEMENT FOR PAVEMENT OF ALL AGES

N.T.S.

1



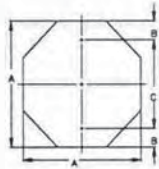
CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

STREET CUT DETAILS SHEET 2 OF 2

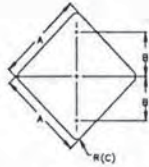
WDS NUMBER M-000285-0001-4	
DRAWING SCALE NTS	
CITY OF HOUSTON PM JEFFREY T. HALL, P.E.	SHEET NO. 351 OF 385

DATE: 04/20/05 T: 04:04 M: 04/20/05 04:04:00 04/20/05 04:04:00 04/20/05 04:04:00



OCTAGONAL

A	B	C	D	E	F	G	H	T
36	3	3	3	3	3	3	3	0.080



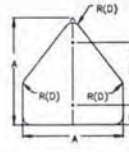
DIAMOND

A	B	C	D	E	F	G	H	T
24	12	1/8	1/8	1/8	1/8	1/8	1/8	0.080
30	15	1/8	1/8	1/8	1/8	1/8	1/8	0.080
36	18	2/8	2/8	2/8	2/8	2/8	2/8	0.080



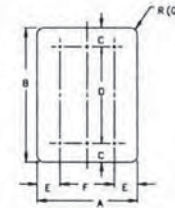
CIRCLE

A	B	T
15	15	0.080
18	12	0.080



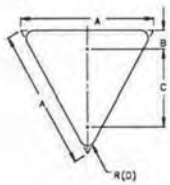
PENTAGON (SCHOOL)

A	B	C	D	T
36	24	13	2/8	0.080



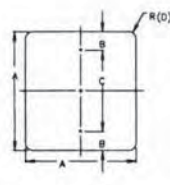
VERTICAL RECTANGLE

A	B	C	D	E	F	G	H	T
36	48	6	36	6	24	2/8	2/8	0.080
48	60	6	48	9	30	3	0.080	



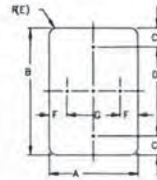
EQUILATERAL TRIANGLE

A	B	C	D	T
36	3	2	2	0.080



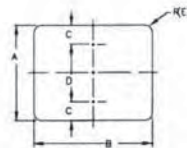
SQUARE (A)

A	B	C	D	T
18	3	1/8	1/8	0.080
24	3	1/8	1/8	0.080
30	3	2/8	2/8	0.080



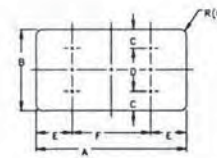
VERTICAL / HORIZONTAL RECTANGLE

A	B	C	D	E	F	G	H	T
12	18	1/8	1/8	1/8	1/8	1/8	1/8	0.080
12	36	3	30	1/8	1/8	1/8	1/8	0.080
18	24	3	18	1/8	1/8	1/8	1/8	0.080
24	30	3	24	1/8	1/8	1/8	1/8	0.080
24	36	3	30	1/8	1/8	1/8	1/8	0.080
24	48	6	36	1/8	1/8	1/8	1/8	0.080
30	36	3	30	1/8	1/8	1/8	1/8	0.080



HORIZONTAL RECTANGLE

A	B	C	D	E	T
24	12	1/8	9	1/8	0.080
24	18	3	12	1/8	0.080
30	24	3	18	1/8	0.080
36	12	1/8	9	1/8	0.080



HORIZONTAL RECTANGLE

A	B	C	D	E	F	G	H	T
36	24	3	18	6	24	1/8	0.080	
48	24	3	18	9	30	1/8	0.080	
48	36	6	24	9	30	2/8	0.080	
60	24	3	18	12	36	1/8	0.080	
60	36	6	24	12	36	2/8	0.080	

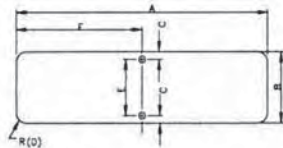


TABLE - D3 SIGNS

A	B	C	D	E	F	G	H	T
30	9	1/8	1/8	8	15	15	0.125	
36	9	1/8	1/8	8	18	18	0.125	
42	9	1/8	1/8	8	21	18	0.125	
48	9	1/8	1/8	8	24	18	0.125	

NOTE:
 1. A 30" LONG OR GREATER PLATE SHALL BE USED WHEN A "NO OUTLET" SUPPLEMENT IS REQUIRED.
 2. THE CITY OF HOUSTON "STOP" AND "YIELD" SIGNS SHALL BE A MINIMUM 36". SPECIAL PERMISSION FROM THE CITY TRAFFIC ENGINEER IS REQUIRED FOR LESS THAN 36" SIGNS.

CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GROUND MOUNTED
 SIGN SIZES

(NOT TO SCALE)

APPROVED BY: *[Signature]*
 CITY ENGINEER

WORKS ENGINEERING

EFF DATE: JUL-01-2012 DWG NO: 01509-03

SDPS
 Houston Storm Drainage
 Program Support

PGAL
 3131 BROADWAY, SUITE 200
 HOUSTON, TEXAS 77042
 PHONE (713) 622-1444
 FAX (713) 988-9333

REGISTERED PROFESSIONAL ENGINEER
 COLLEGE F. GEORGE
 1923

SUPERVISED BY: LANDTECH
 P.E. NO. 19-5576

CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND
 SHEPHERD PARK (CENTRAL)
 DRAINAGE AND PAVING

TRAFFIC DETAILS
 SHEET 4 OF 8

WBS NUMBER
 M-000285-0001-4
 DRAWING SCALE
 NTS
 CITY OF HOUSTON PM
 JEFFREY T. HALL, P.E.
 SHEET NO. 352COF 385

55630

REGULATORY SIGNS		
Stop	R1-1	36x36
Yield	R1-2	36x36x36
All Way Plaque	R1-3P	18x6
Yield Here to Pedestrians	R1-5a	36x48
Except Right Turn (Plaque)	R1-10P(1)	24x18
Except Buses (Plaque)	R1-10P(2)	24x18
Speed Limit	R2-1	30x36
Minimum Speed Limit (Plaque)	R2-4P	24x30
No Right Turns	R3-1	36x36
No Left Turns	R3-2	36x36
No U-Turns	R3-4	36x36
Left/Right Turn Only	R3-5	30x36
Thru Only	R3-5a	30x36
Left Turn/Thru	R3-6	30x36
Left/Right Lane Must Turn Left/Right	R3-7	36x36
Advance Intersection Lane Control (Varies)	R3-8	Varies x 30
Two-Way Left Turn Only (Overhead)	R3-9a	30x36
Two-Way Left Turn Lane (Post Mounted)	R3-9b	24x24
BEGIN	R3-9cP	30x12
END	R3-9dP	30x12
Reversible Lane Control (Symbol)	R3-9e	108x48
Reversible Lane Control (Post Mounted)	R3-9f	36x36
Advance Reversible Lane Control Transition	R3-9g,9h	108x36
End Reversible Lane	R3-9i	108x48
Bike Lane	R3-17	24x18
Slower Traffic Keep Right	R4-3	24x30
Begin right Turn Lane Yield to Bikes	R4-4	36x30
Keep Right	R4-7	24x30
Keep Left	R4-8	24x30
Do Not Drive on Shoulder	R4-17	24x30
Do Not Pass on Shoulder	R4-18	24x30
Do Not Enter	R5-1	36x36
Wrong Way	R5-1a	42x30
No Trucks (Symbol)	R5-2(1)	24x24
No Thru Trucks (Text)	R5-2(2)	24x30
One Way (Long)	R6-1	54x18
One Way	R6-2	30x36
Roundabout Directional (2 Chevrons)	R6-4	30x24
Roundabout Circulation (Plaque)	R6-5P	30x30
Begin One Way	R6-6	30x36
End One Way	R6-7	30x36
Parking Restriction (Arrow)	R7-2 (1)	12x18
Parking Restriction (To Corner)	R7-2 (2)	12x18
Parking Restriction (Bus Zone)	R7-2 (3)	12x18

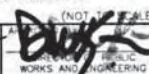
REGULATORY SIGNS		
Parking Restriction (Valet Zone)	R7-2 (4)	12x18
Parking Restriction (Peak Period)	R7-2 (5)	12x18
Parking Restriction (Emergency Veh. Only)	R7-2 (6)	12x18
Parking Restriction (Taxi Zone)	R7-2 (7)	12x18
Parking Restriction (No Stopping or Standing)	R7-2 (8)	12x18
Parking Restriction (Jinney Stop)	R7-2 (9)	12x18
Parking Restriction (Pod-Cab Zone)	R7-2 (10)	12x18
Parking Restriction (Limo Zone)	R7-2 (11)	12x18
Parking Restriction (Commercial Veh. Zone)	R7-2 (12)	12x18
Parking Restriction (Fed./City Authorized Veh. Only)	R7-2 (13)	12x18
Parking Restriction (U.S. Marshal Parking Only)	R7-2 (14)	12x18
Parking Restriction (Emergency)	R7-2 (15)	12x18
Parking Time Limit (Varies)	R7-108	12x18
Handicapped Parking	R7-8T	12x18
Tow Away Zone (Plaque)	R7-201P	12x6
Parking Meter (COH)	R7-110	12x18
On Tracks (Plaque)	R8-3aP	24x18
Cross Only At Crosswalks (Symbol)	R9-2	12x18
No Pedestrian Crossing (Symbol)	R9-3	18x18
No Pedestrian Crossing	R9-3a	12x18
Pedestrian Crossing	R9-8	36x18
Sidewalk Closed	R9-9	24x12
Sidewalk Closed-Use Other Side	R9-10	24x12
Sidewalk Closed Cross Here	R9-11a	24x12
Push Button For Pedestrian Crossing	R10-3e	9x15
Left on Green Arrow Only	R10-5	30x24
Stop Here on Red	R10-6	24x36
Do Not Block Intersection	R10-7	24x30
Left/Right Turn Signal	R10-10	30x36
No Turn on Road (Text)	R10-11a	36x48
Left Turn Yield on Green	R10-12	30x36
Crosswalk, Stop on Red	R10-23	24x30
Keep Off Median	R11-1	24x30
Road Closed	R11-2	48x30
Road Closed Local Traffic Only	R11-3a	60x30
Bridge Out Local Traffic Only	R11-3b	60x30
Road Closed to Thru Traffic	R11-4	60x30
Weight Limit xx Tons	R12-1	24x30
Axle Weight Limit xx Tons/Lbs	R12-2	24x30
No Trucks Over xx Tons/Lbs Empty Weight	R12-3	24x36
Weight Limit xx Tons per Axle xx Tons Gross	R12-4	36x24
Load Zoned Bridge	R12aT	Varies x 36
Truck Route	R14-1	24x18
Grade Crossing (Crossbuck)	R15-1	48x9
Number of Trucks (Plaque)	R15-2P	27x18

CONSTRUCTION WORK SIGNS		
Right Angle Turn	CW1-1	36x36
Horizontal Curve	CW1-2	36x36
Reverse Right Angle Turn	CW1-3	36x36
Reverse Horizontal Curves	CW1-4	36x36
Reverse Curve (2 Lanes)	CW1-4b	36x36
Reverse Curve (More Than 2 Lanes)	CW1-4c	36x36
One-Direction Large Arrow	CW1-6	48x24
Upward Sloping Arrow	CW1-6aT	36x36
Chevron	CW1-8	18x24
Stop Ahead	CW3-1	36x36
Signal Ahead	CW3-3	36x36
Be Prepared to Stop	CW3-4	36x36
Road Narrows	CW5-1	36x36
Narrow Bridge	CW5-2	36x36
Two-Way Traffic Flow	CW6-3	36x36
Two-Way Traffic	CW6-4	12x18
Bump	CW8-1	36x36
Dip	CW8-2	36x36
Soft Shoulder	CW8-4	36x36
Truck Crossing	CW8-6	36x36
Rough Road	CW8-8	36x36
Overrun Lane	CW8-11	36x36
Left Lane Ends	CW9-1(1)	36x36
Right Lane Ends	CW9-1(2)	36x36
Double Arrow	CW12-1	30x30
Advisory Speed (plaque)	CW13-1P	24x24
XX Feet (plaque)	CW16-2P	24x18
Ahead (Plaque)	CW16-3	24x12
Road Work Ahead	CW20-1	36x36
Detour Ahead	CW20-2	36x36
Road Closed Ahead	CW20-3	36x36
One Lane Road	CW20-4	36x36
Left Lane Closed	CW20-5(1)	36x36
Right Lane Closed	CW20-5(2)	36x36
Flagger (Symbol)	CW20-7	36x36
Narrow Lane Ahead	CW20-8T	36x36
Shoulder Work Ahead	CW21-5	36x36
Utility Work Ahead	CW21-7	36x36
Double Reverse Curve (1 Lane)	CW24-1	36x36
Double Reverse Curve (2 Lanes)	CW24-1a	36x36
Double Reverse Curve (3 Lanes)	CW24-1b	36x36
End Road Work	G20-2	36x18
Detour Walk Arrows	M4-9	30x24
End Detour	M4-9a	24x18
Pedestrian Detour	M4-9b	30x24
Detour	M4-10	48x18

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GENERAL NOTES AND
GROUND SIGN MOUNTING

(NOT FOR SALE)

APPROVED BY:  ENGINEER

EFF. DATE: 3-23-07-2012 DWG. NO: 01509-05



3131 BRIMFARROW, SUITE 200
HOUSTON, TEXAS 77042
PHONE (713) 852-1444
FAX (713) 968-9333



CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND
SHEPHERD PARK (CENTRAL)
DRAINAGE AND PAVING

TRAFFIC DETAILS
SHEET 6 OF 8

WBS NUMBER
M-000285-0001-4
DRAWING SCALE
NTS
CITY OF HOUSTON PW
JEFFREY T. HALL, P.E.
SHEET NO. 352E0F 385

55630

WARNING SIGNS		
Right Angle Turn Curve	W1-1	30x30
Right Angle Turn With Speed Limit	W1-1a	36x36
Horizontal Curve	W1-2	30x30
Horizontal Curve With Speed Limit	W1-2a	36x36
Reverse Right Angle Turn	W1-3	30x30
Reverse Horizontal Curve	W1-4	30x30
Winding Road	W1-5	30x30
One Direction Large Arrow	W1-6	48x24
Two Direction Large Arrow	W1-7	48x24
Chevron Alignment	W1-8	18x24
Hairpin Curve	W1-11	30x30
Truck Rollover	W1-13	36x36
Cross Road	W2-1	30x30
Side Street T-Intersection (Symbol)	W2-2	30x30
T-Intersection (Symbol)	W2-4	30x30
Y-Intersection (Symbol)	W2-5	30x30
Roundabout (Symbol)	W2-6	30x30
Stop Ahead	W3-1	30x30
Signal Ahead	W3-3	30x30
Reduced Speed Limit Ahead	W3-5	36x36
Merge	W4-1	36x36
Lane Ends	W4-2	36x36
Added Lane	W4-3	36x36
Cross Traffic Does Not Stop (Plaque)	W4-4P	24x12
Road Narrows	W5-1	36x36
Narrow Bridge	W5-2	36x36
Divided Highway	W6-1	36x36
Divided Highway Ends	W6-2	36x36
Two Way Traffic (Symbol)	W6-3	36x36
Bump	W8-1	30x30
Dip	W8-2	30x30
Pavement Ends	W8-3	36x36
Soft Shoulder	W8-4	36x36
Track Crossing	W8-6	36x36
Loose Gravel	W8-7	36x36
Rough Road	W8-8	36x36
Uneven Lanes	W8-11	36x36
Watch for ICE on Bridge	W8-13T	36x36
Shoulder Drop-Off (Symbol)	W8-17	30x30
Shoulder Drop-Off (Plaque)	W8-17P	24x18

WARNING SIGNS		
Flood Gauge	W8-19	12x72
No Shoulder	W8-23	36x36
Shoulder Ends	W8-25	36x36
Left Lane Ends	W9-1(1)	36x36
Right Lane Ends	W9-1(2)	36x36
Lane Ends Merge Left	W9-2(1)	36x36
Lane Ends Merge Right	W9-2(2)	36x36
Grade Crossing Advance Warning	W10-1	30Dia.
No Train Horn	W10-9	36x36
No Train Horn (Plaque)	W10-9P	30x24
Bicycle	W11-1	30x30
Pedestrian	W11-2	36x36
Emergency Vehicle	W11-8	30x30
Handicapped	W11-9	30x30
Truck	W11-10	30x30
Emergency Signal Ahead (Plaque)	W11-12P	36x30
Bicycle/Pedestrian	W11-15	30x30
Trail Crossing (Plaque)	W11-15P	24x18
Double Arrow	W12-1	30x30
Low Clearance With Arrows	W12-2	36x36
Low Clearance	W12-2a	78x24
Loaded Zoned Bridge	W12-5T	36x36
Advisory Speed (Plaque)	W13-1P	18x18
No Outlet	W14-2	24x24
No Outlet With Arrow	W14-2a	36x6
Share the Road (Plaque)	W16-1P	18x24
xx Feet (Plaque)	W16-2P	24x18
Nest xx Feet (Plaque)	W16-4P	30x24
Supplemental Left Arrow (Plaque)	W16-5P(1)	24x18
Supplemental Right Arrow (Plaque)	W16-5P(2)	24x18
Diagonal Arrow (Plaque)	W16-7P	24x12
Ahead (Plaque)	W16-9P	24x12
When Flashing (Plaque)	W16-13P	24x18
Roundabout (Plaque)	W16-17	24x12
Speed Hump	W17-1	30x30
Type 3 Object Marker (Left)	OM3-L	12x36
Type 3 Object Marker (Right)	OM3-R	12x36
Type 3 Object Marker (Center)	OM3-C	12x36
Type 4 Object Marker	OM4-1	18x18

BICYCLE SIGNS		
Bike Route	D11-1	24x18
Bike Route to Downtown	D11-1c	24x18
END	M4-6	12x6
BEGUN	M4-14	12x6
Bicycle Route (Left Arrow)	M6-1(1)	12x9
Bicycle Route (Right Arrow)	M6-1(2)	12x9
Bicycle Route (Thru Arrow)	M6-3	12x9
Bicycle Route (Left-Right Arrow)	M6-4	12x9
Bicycle Route (Thru-Right Arrow)	M6-6	12x9

SCHOOL SIGNS		
School	S1-1 (FYG)	36x36
x:xx to x:xx AM and PM (Plaque)	S4-1P	24x10
School (Plaque)	S4-3P (FYG)	24x8
When Flashing (Plaque)	S4-4P	24x10
Reduced School Speed Limit Ahead	S4-5a (FYG)	36x36
School Speed Limit xx When Flashing	S5-1 (FYG)	24x48
End School Zone	S5-2	24x30
End School Zone (Plaque)	S5-2aTP	24x10
Cell Phone Use Prohibited	S7-1T	24x18
Turn Arrow (Plaque)	SW16-5P (FYG)	24x12
Advance Turn Arrow (Plaque)	SW16-6P (FYG)	24x12
Diagonal Arrow (Plaque)	SW16-7P (FYG)	24x12
Ahead (Plaque)	S16-9P (FYG)	24x12
FYG - Fluorescent Yellow-Green Background Color		

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GENERAL NOTES AND
GROUND SIGN MOUNTING

(NOT TO SCALE)

APPROVED BY: *[Signature]*
CITY ENGINEER

PREPARED BY: *[Signature]*
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

EFF. DATE: JUL-01-2012 DWG NO.: 01509-06



3121 BIRMPARK, SUITE 200
HOUSTON, TEXAS 77042
PHONE (713) 822-1444
FAX (713) 988-9333



SURVEYED BY: LANGTECH
PR NO.: P-9516

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND
SHEPHERD PARK (CENTRAL)
DRAINAGE AND PAVING

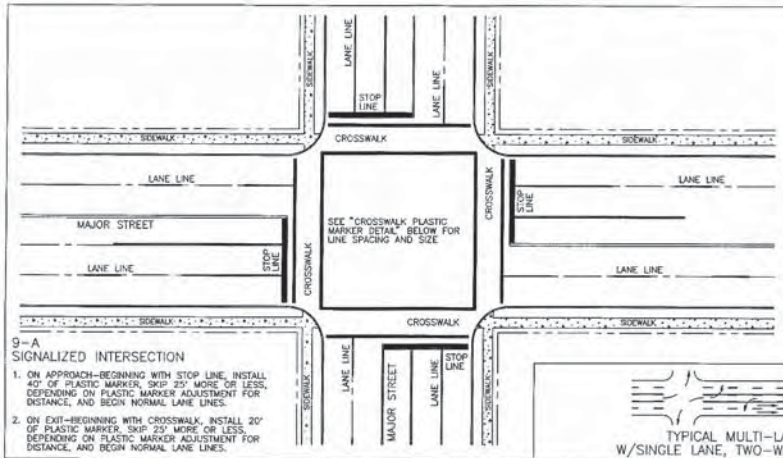
TRAFFIC DETAILS
SHEET 7 OF 8

WBS NUMBER
M-000285-0001-4
DRAWING SCALE
NTS
CITY OF HOUSTON PW
JEFFREY T. HALL, P.E.
SHEET NO. 352FOF 385



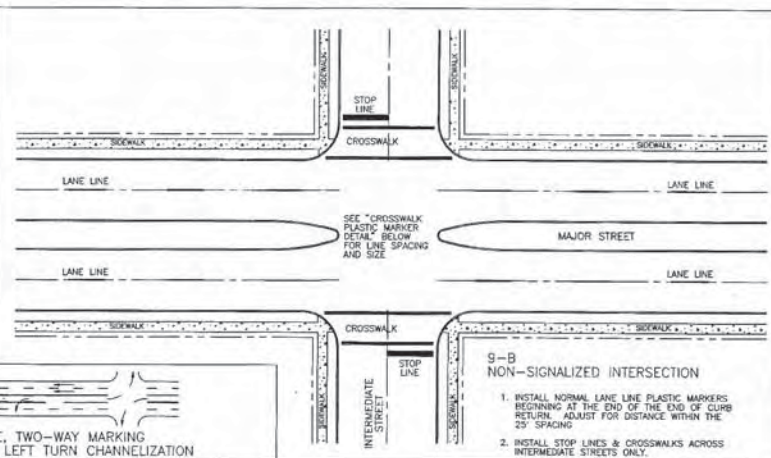
DATE: 9/20/2015 7:54:16 AM
A:\000045\CAD\0001_DWG\0001\001.DWG

DATE: 01/10/05 4:40:00 PM
 P:\0000045\CA\0302_D05\0505105M_DRAWING_STRIP.DWG



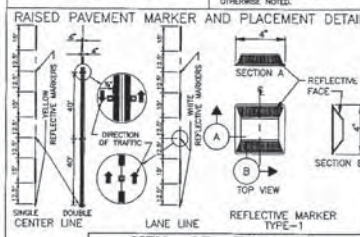
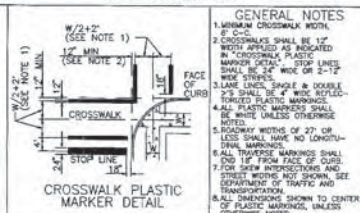
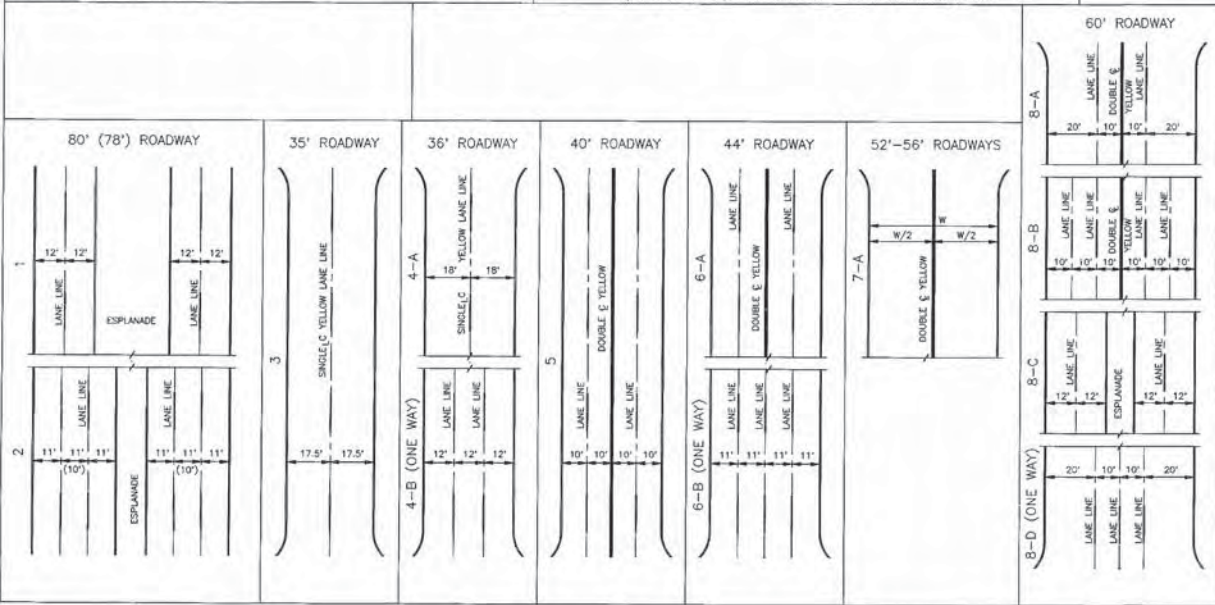
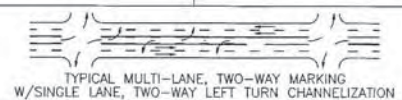
9-A SIGNALIZED INTERSECTION

- ON APPROACH—BEGINNING WITH STOP LINE, INSTALL 40' OF PLASTIC MARKERS, SKIP 25' MORE OR LESS, DEPENDING ON PLASTIC MARKER ADJUSTMENT FOR DISTANCE, AND BEGIN NORMAL LANE LINES.
- ON EXIT—BEGINNING WITH CROSSWALK, INSTALL 20' OF PLASTIC MARKER, SKIP 25' MORE OR LESS, DEPENDING ON PLASTIC MARKER ADJUSTMENT FOR DISTANCE, AND BEGIN NORMAL LANE LINES.



9-B NON-SIGNALIZED INTERSECTION

- INSTALL NORMAL LANE LINE PLASTIC MARKERS BEGINNING AT THE END OF THE END OF CURB RETURN, ADJUST FOR DISTANCE WITHIN THE 25' SPACING.
- INSTALL STOP LINES & CROSSWALKS ACROSS INTERMEDIATE STREETS ONLY.



GENERAL NOTES

- MINIMUM CROSSWALK WIDTH: 8'-0\"/>
- CROSSWALKS SHALL BE 12\"/>
- LANE LINES, SINGLE & DOUBLE YELLOW CENTER LINES, AND DOUBLE YELLOW TURNING LINES SHALL BE 2\"/>
- LANE LINES, SINGLE & DOUBLE YELLOW CENTER LINES, AND DOUBLE YELLOW TURNING LINES SHALL BE 2\"/>
- ROADWAY WIDTHS OF 27' OR LESS SHALL HAVE NO LONGITUDINAL MARKINGS.
- ALL TRAFFIC MARKINGS SHALL END 18\"/>
- FOR SPIN HYDROSEALERS AND STREET WORKS NOT SHOWN, SEE DEPARTMENT OF TRAFFIC AND TRANSPORTATION.
- ALL DIMENSIONS SHOWN TO CENTER OF PLASTIC MARKINGS, UNLESS OTHERWISE NOTED.

CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
 ENGINEERING, CONSTRUCTION AND REAL ESTATE DIVISION

PAVEMENT MARKING DETAILS
 (NOT TO SCALE)

APPROVED BY: *[Signature]* CITY ENGINEER
 APPROVED BY: *[Signature]* DIRECTOR OF PUBLIC WORKS AND ENGINEERING

EFF DATE: OCT-01-2004 DWG NO: 02763-01

SDPS
 Houston Storm Drainage Program Support

PGAL
 3131 BRIDGEMAN, SUITE 200
 HOUSTON, TEXAS 77042
 PHONE (713) 622-1444
 FAX (713) 968-9333

CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

STRIPING DETAILS SHEET 1 OF 3

WBS NUMBER: M-000285-0001-4
 DRAWING SCALE: NTS
 CITY OF HOUSTON PM: JEFFREY T. HALL, P.E.
 SHEET NO. 353 OF 385

55630

GENERAL PAVEMENT MARKING NOTES:

- PRIOR TO START OF CONSTRUCTION, ALL EXISTING PAVEMENT MARKINGS WITHIN THE AREA OF CONSTRUCTION SHALL BE INVENTORIED AND DOCUMENTED JOINTLY BY THE CITY INSPECTOR AND THE CONTRACTOR. THIS DOCUMENT WILL BE JOINTLY SIGNED BY BOTH PARTIES REFLECTING ALL EXISTING PAVEMENT MARKINGS AND LANE CONFIGURATIONS WILL BE DUPLICATED AGAIN. THIS REVIEW CAN BE DONE IN CONJUNCTION WITH SIGN INVENTORY. THE CONTRACTOR IS HELD ACCOUNTABLE FOR EXISTING AND TEMPORARY CONSTRUCTION PAVEMENT MARKINGS THROUGHOUT THE PROJECT AND AT THE PROJECT'S COMPLETION.
- ALL PAVEMENT MARKINGS SHALL CONFORM TO CITY OF HOUSTON STANDARDS AND SPECIFICATIONS AND GENERAL GUIDELINES OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (TMUTCD).
- THE PERMANENT PAVEMENT MARKINGS MAY BE MODIFIED AS DIRECTED BY THE CITY TRAFFIC ENGINEER.
- THE DESIGN SPEED FOR THE ROAD IS: ____ THE POSTED SPEED LIMIT IS: ____
- ALL LANE DIMENSIONS ARE FROM CENTER OF LANE LINE, CENTER OF DOUBLE LANE LINE, FACE OF CURB, OR EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.
- THE PAVEMENT MARKING DRAWINGS ARE SCHEMATIC ONLY. THE CONTRACTOR SHALL FOLLOW ALL DIMENSIONS, DETAILS, AND STANDARDS WHEN INSTALLING PAVEMENT MARKINGS AND SYMBOLS.
- THE FINAL LONGITUDINAL STRIPINGS SHALL BE 80 MIL (0.080") THICK HOT-SPRAYED THERMOPLASTIC PLACED OVER THE TEMPORARY STRIPING WITHIN 14 TO 30 CALENDAR DAYS AFTER COMPLETION OF THE FINAL PAVEMENT SURFACE OR AS DIRECTED BY THE CITY TRAFFIC ENGINEER. ALL OTHER PAVEMENT MARKINGS SHALL BE APPLIED AT THE SAME TIME. TEMPORARY STRIPING SHALL BE WATER BASED PAINT.
- ALL FINAL TRANSVERSE MARKINGS SHALL BE 90 MIL (0.090") HOT-SPRAYED THERMOPLASTIC. ALL PAVEMENT ARROWS AND LEGENDS SHALL ALSO BE 90 MIL (0.090") HOT-SPRAYED THERMOPLASTIC. PREFORMED THERMOPLASTIC APPLICATIONS MAY BE USED IF ONLY APPROVED BY THE CITY TRAFFIC ENGINEER.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LAYOUT AND INSTALLATION OF PAVEMENT MARKINGS OF FINAL SURFACE COURSE FOLLOWING CONTROL POINTS THAT HAVE BEEN SET NO MORE THAN 50 FEET APART ALONG THE LINES TO BE IMPLEMENTED. IN TANGENT SECTIONS OF A ROAD WHERE THE PAVEMENT MARKING PATTERN DOES NOT CHANGE, CONTROL POINTS CAN BE SET AT 200 FEET SPACING. THE LAYOUT AND INSPECTION OF ALL PAVEMENT MARKINGS SHALL BE APPROVED BY CITY OF HOUSTON REPRESENTATIVE PRIOR TO THE APPLICATION OF MATERIALS.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT THE FINAL SURFACE COURSE IS PLACED SO THAT THE STRIPING IS OFFSET NO MORE THAN ONE FOOT CLEAR OF THE CONSTRUCTION JOINT, UNLESS OTHERWISE DIRECTED BY THE CITY TRAFFIC ENGINEER.
- ALL RAISED PAVEMENT MARKERS (RPMs) SHALL BE INSTALLED SO THAT THE REFLECTIVE FACE OF EACH MARKER IS FACING THE DIRECTION OF TRAFFIC AND IS PERPENDICULAR TO THE DIRECTION OF TRAFFIC FLOW. TYPE C PAVEMENT MARKERS SHALL BE INSTALLED SO THAT THE CLEAR FACE OF EACH MARKER IS FACING THE APPROACHING TRAFFIC FLOW AND PERPENDICULAR TO THE DIRECTION OF TRAFFIC FLOW.
- ALL REMOVAL OF EXISTING PAVEMENT MARKINGS SHALL BE ACCOMPLISHED IN ACCORDANCE TO CITY OF HOUSTON STANDARD SPECIFICATION 02762. APPLYING OVER EXISTING PAVEMENT MARKINGS DOES NOT CONSTITUTE AS APPROVED OBLITERATION METHOD.
- THE ENGINEER OF RECORD SHALL BE REQUIRED TO PRODUCE AS-BUILT OF PAVEMENT MARKING PLANS WITHIN 30 DAYS AFTER COMPLETION OF PAVEMENT MARKING IMPLEMENTATION.
- BLUE RPMs MAY BE PLACED ADJACENT TO FIRE HYDRANTS WITH THE APPROVAL OF THE CITY TRAFFIC ENGINEER.
- FOR ALL CONSTRUCTION, ALL PAVEMENT MARKINGS AND SIGNING SHALL BE INSTALLED AND SHALL BE PAID BY THE PROJECT OWNER/DEVELOPER.
- FINAL INSPECTION AND ACCEPTANCE OF PAVEMENT MARKINGS SHALL BE PERFORMED BY TRAFFIC OPERATIONS DIVISION REPRESENTATIVE (713-863-3654).

Description and Application of Pavement Marking Lines

Line Series	Color	Description	Width Inches	Typical Applications
WB	White	Broken (10' stripe w/ 30' gap)	4"	- Lane lines between travel lanes in the same direction where changing of lanes is permitted.
WS	White	Solid	4" 6" 12" 24" 24" 12", 24"	- Edge lines to delineate the right edge of the roadway. - Left edge of bicycle lane and lane lines between travel lanes in the same direction where changing of lanes is discouraged. - Perpendicular crosswalk lines. - Stop bars at intersections (signalized and unsignalized). - Hatching at high visibility crosswalks. - Diagonal hatching used in gore between same direction of travel lanes.
WG	White	Guide (2' stripe w/6' gap)	6" 6"	- Guide lines through intersections. - Taper lines for turn lanes.
YS	Yellow	Solid	4" 12", 24"	- Edge lines to delineate the left edge of a divided roadway, a one-way road, or ramp. - Diagonal hatching used in gore between opposing direction of travel lanes.
YDS	Yellow	Double Solid	4" - (4") - 4" (gap)	- Centerline that separates opposing travel lanes and delineation of median islands.
YDB	Yellow	Double Broken	4" - (4") - 4" (gap)	- Defines the edges of center reversible lanes that are used as TWLTLs during intermittent periods.
YB	Yellow	Broken (10' stripe w/ 30' gap)	4"	- Separates travel lanes in opposite directions where passing is permitted in both directions of travel.
YSB	Yellow	Solid & Broken Broken (10' stripe w/ 30' gap)	4" - (4") - 4" (gap)	- Separates travel lanes in opposite directions where passing is permitted in one direction and prohibited in the opposite direction. - Used for edge of two-way left-turn lanes (TWLTL).

Description and Application of Reflective Raised Pavement Markers (RRPM)

RRPM Types	Color	COH Stand. Spec. Sec. 02764 Equivalent	Description
C	Clear	Type I-C	- Approach face that reflects white light, and the other side does not reflect.
R	Clear & Red	Type II-C-R	- Approach face that reflects white light, and the other side reflects red light.
A	Amber & Amber	Type II-A-A	- Approach face and the other side both reflect amber light.

Line Style Designation : YSB4 - A40/A40



CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GENERAL NOTES AND LEGENDS

APPROVED BY: [Signature] DATE: []/ []/ [] (NOT TO SCALE)
CITY ENGINEER DIRECTOR OF PUBLIC WORKS AND ENGINEERING

EFF DATE: JUL-01-2012 DWG NO: 01510-01

GENERAL NOTES AND LEGENDS

N.T.S.

1



3131 BRANFORD, SUITE 200
HOUSTON, TEXAS 77042
PHONE (713) 822-1444
FAX (713) 968-9333



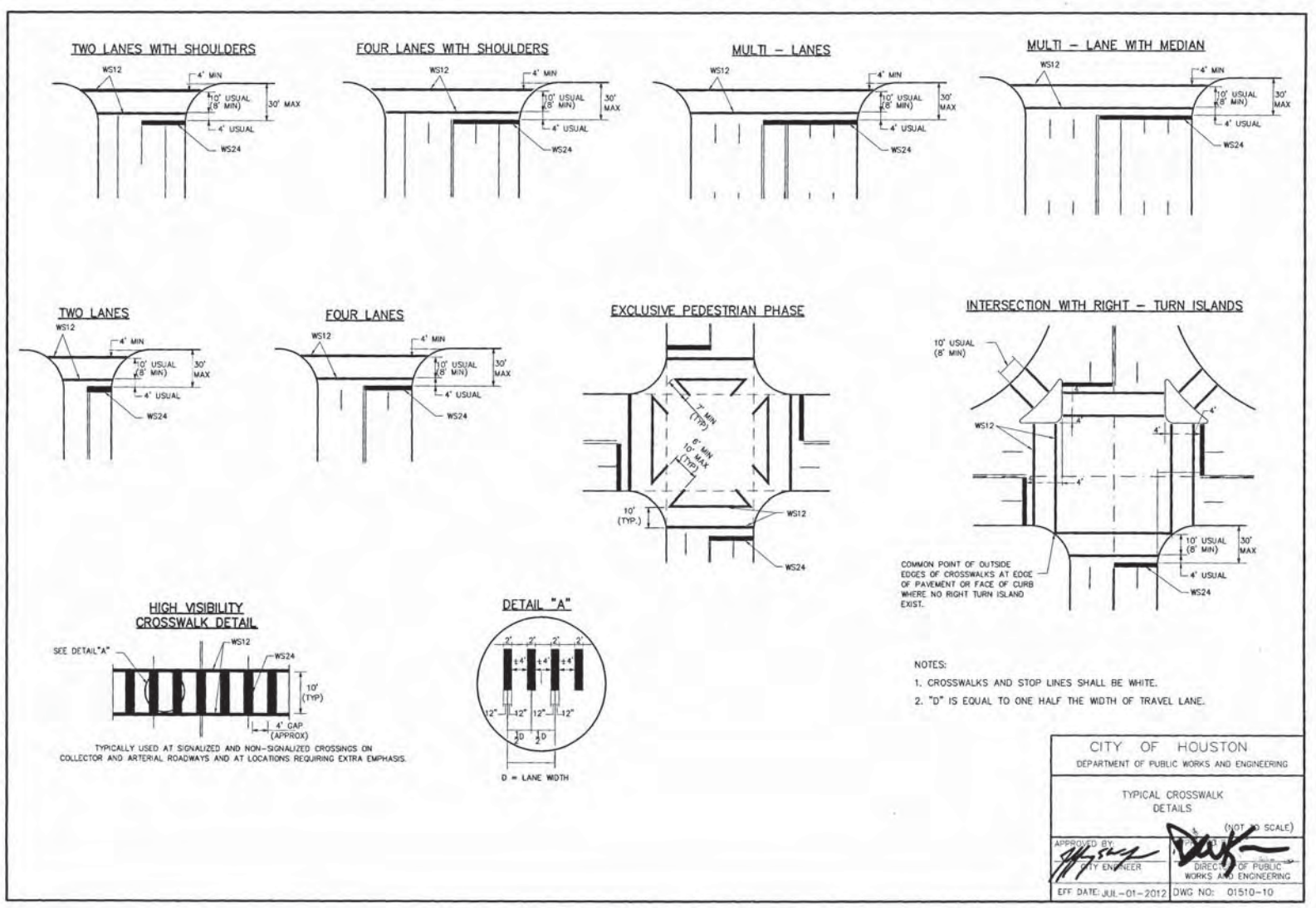
CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

STRIPING DETAILS SHEET 2 OF 3

WBS NUMBER
M-000285-0001-4
DRAWING SCALE
NTS
55630
CITY OF HOUSTON PM
JEFFREY T. HALL, P. E.
SHEET NO. 553A0F 385

DATE: 01/1/2015 4:52:40 PM
R:\0000945-CO-03000-DWG\CO-03000-DWG-DTL-STRIP-DWG.dwg



- NOTES:
- CROSSWALKS AND STOP LINES SHALL BE WHITE.
 - "D" IS EQUAL TO ONE HALF THE WIDTH OF TRAVEL LANE.

CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

TYPICAL CROSSWALK DETAILS
 (NOT TO SCALE)

APPROVED BY: *[Signature]*
 CITY ENGINEER

[Signature]
 DIRECTOR OF PUBLIC WORKS AND ENGINEERING

EFF DATE: JUL-01-2012 DWG NO: 01510-10

TYPICAL CROSSWALK DETAILS 1
 N.T.S.

SDPS
 Houston Storm Drainage Program Support

PGAL

3896 WES
 NO. 7-2552
 3131 BRIDGEMAN, SUITE 200
 HOUSTON, TEXAS 77042
 PHONE (713) 622-1444
 FAX (713) 968-9333

SURVEYED BY: LANDTECH
 FB NO.: # 0516

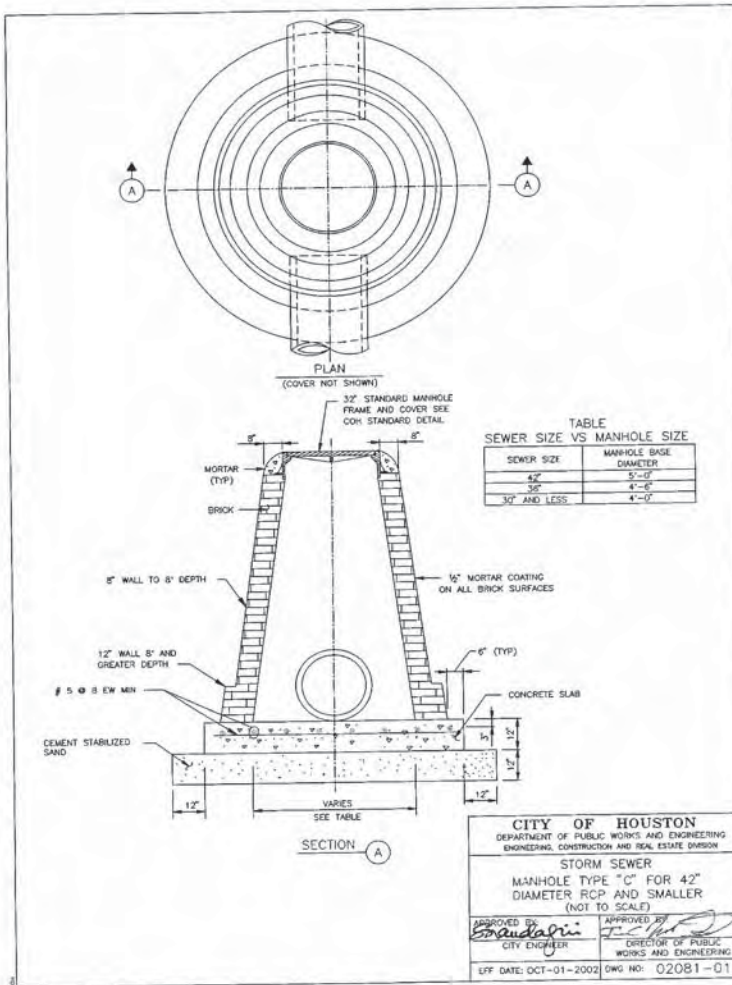
CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

**STRIPING DETAILS
 SHEET 3 OF 3**

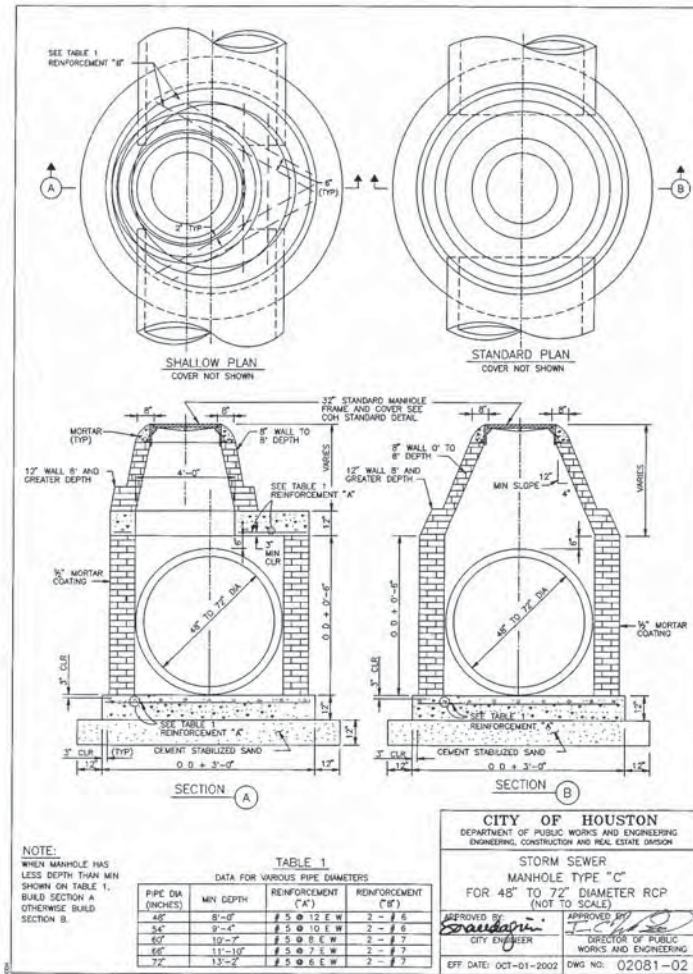
WBS NUMBER
 M-000285-0001-4
 DRAWING SCALE
 NTS
 CITY OF HOUSTON PM
 JEFFREY T. HALL, P.E.
 SHEET NO. 353B OF 385

55630



STORM SEWER MANHOLE TYPE "C" FOR 42" DIAMETER RCP AND SMALLER

N.T.S.



STORM SEWER MANHOLE TYPE "C" FOR 48" TO 72" DIAMETER RCP

N.T.S.

SDPS
Houston Storm Drainage
Program Support

PCAL
3131 BRADSHAW, SUITE 200
HOUSTON, TEXAS 77042
PHONE (713) 622-1444
FAX (713) 968-9333

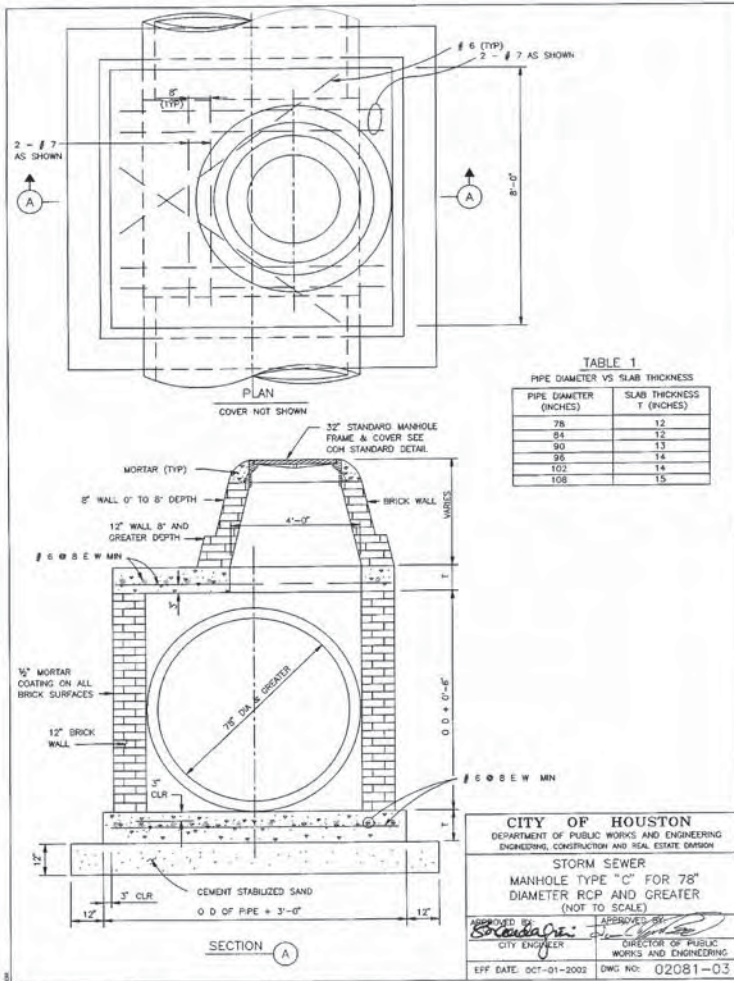
CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL)
DRAINAGE AND PAVING

STORM SEWER DETAILS
SHEET 1 OF 16

WBS NUMBER
M-000285-0001-4
DRAWING SCALE
NTS
CITY OF HOUSTON PM
JEFFREY T. HALL, P.E.
SHEET NO. 354 OF 385

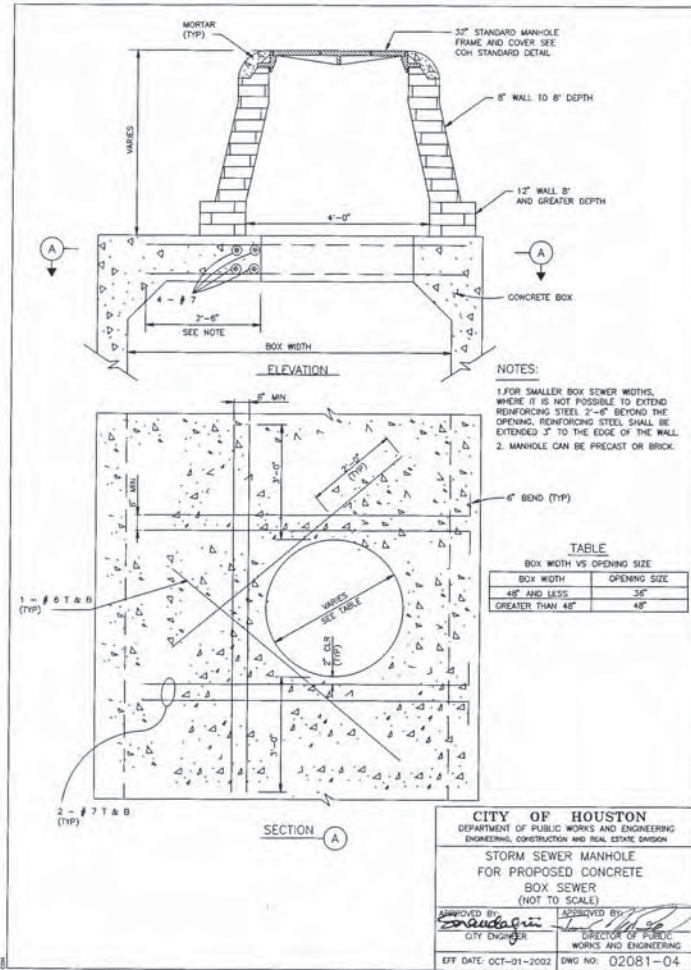
55630



STORM SEWER MANHOLE TYPE "C" FOR 78" DIAMETER RCP AND GREATER

N.T.S.

1



STORM SEWER MANHOLE FOR PROPOSED CONCRETE SEWER

N.T.S.

1



3131 BRANNING, SUITE 200
HOUSTON, TEXAS 77042
PHONE (713) 622-1444
FAX (713) 958-9333



CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

STORM SEWER DETAILS
SHEET 2 OF 16

WBS NUMBER

M-000285-0001-4

DRAWING SCALE

NTS

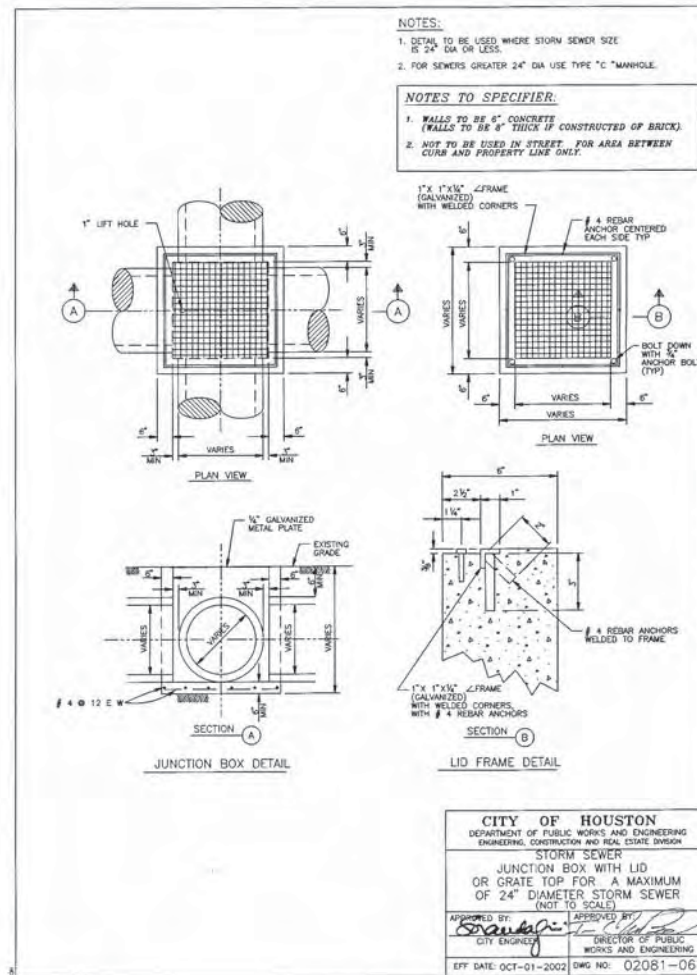
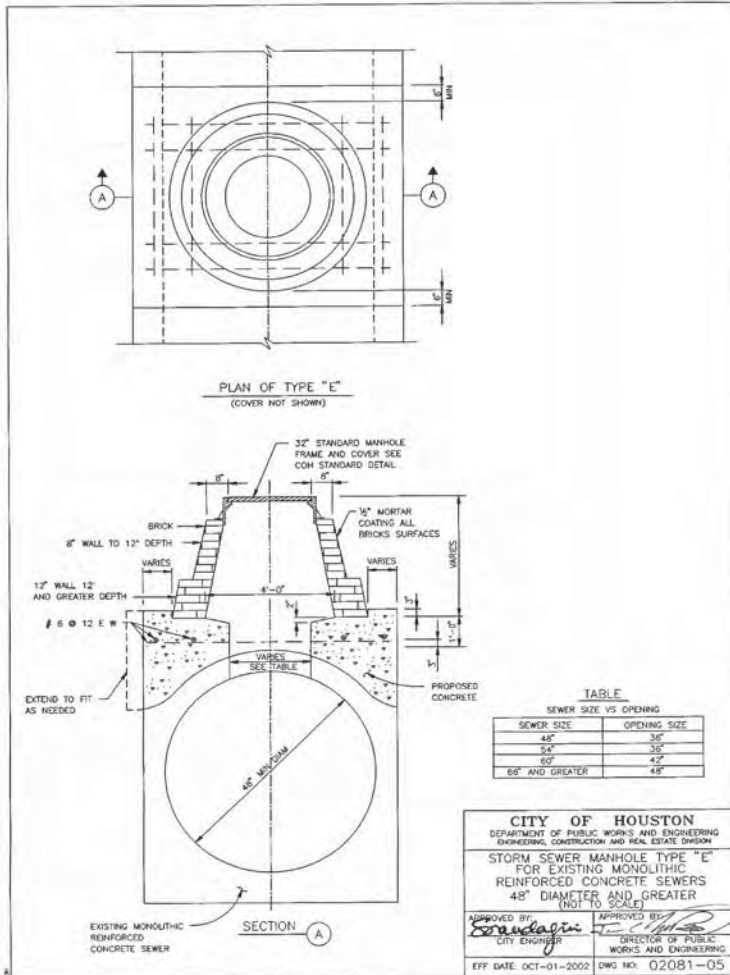
CITY OF HOUSTON PW

JEFFREY T. HALL, P.E.

SHEET NO. 355 OF 385

55630

DATE: 10/20/04 7:49 AM
PLotted: 10/20/04 8:00 AM
DRAWN BY: JTH/STW



MANHOLE TYPE "E" FOR EXISTING MONOLITHIC REINFORCED CONCRETE SEWER 48" DIAMETER AND GREATER

N.T.S.

1

JUNCTION BOX WITH LID OR GRATE TOP FOR A MAXIMUM OF 24" DIAMETER STORM SEWER

N.T.S.

1

DATE: 10/20/05 7:47:19 AM
R:\02081\05\DWG\02081-05.DWG

SDPS
Houston Storm Drainage Program Support

PGAL
INPE 950
NO. 1-2942
3131 BRADSHAW, SUITE 200
HOUSTON, TEXAS 77042
PHONE (713) 622-1444
FAX (713) 960-9333

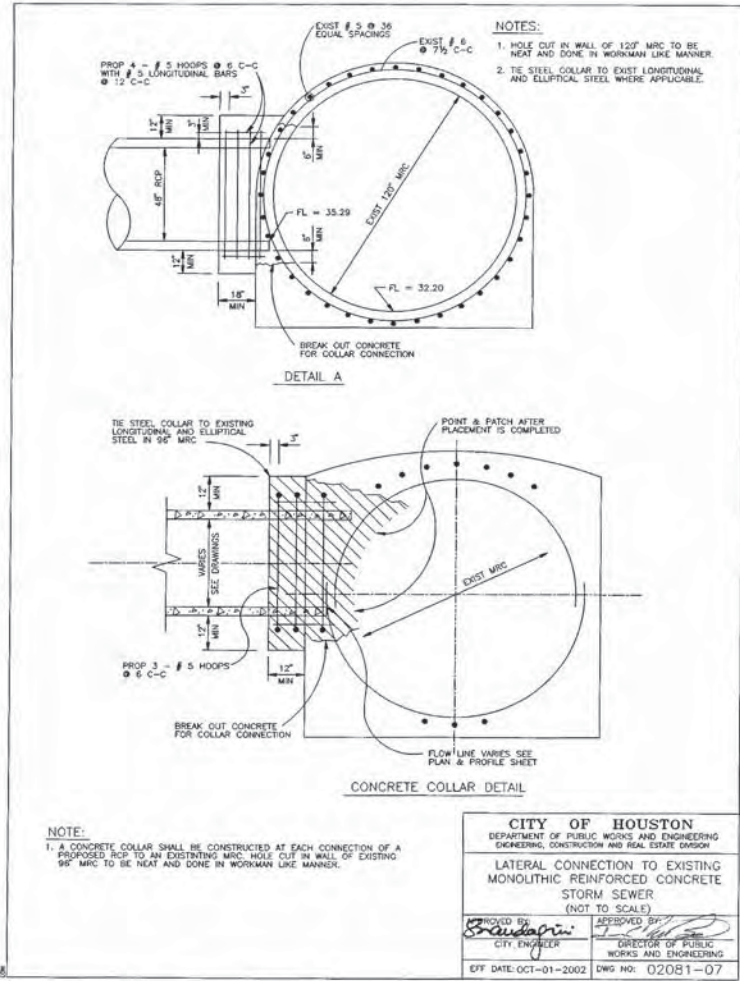
CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

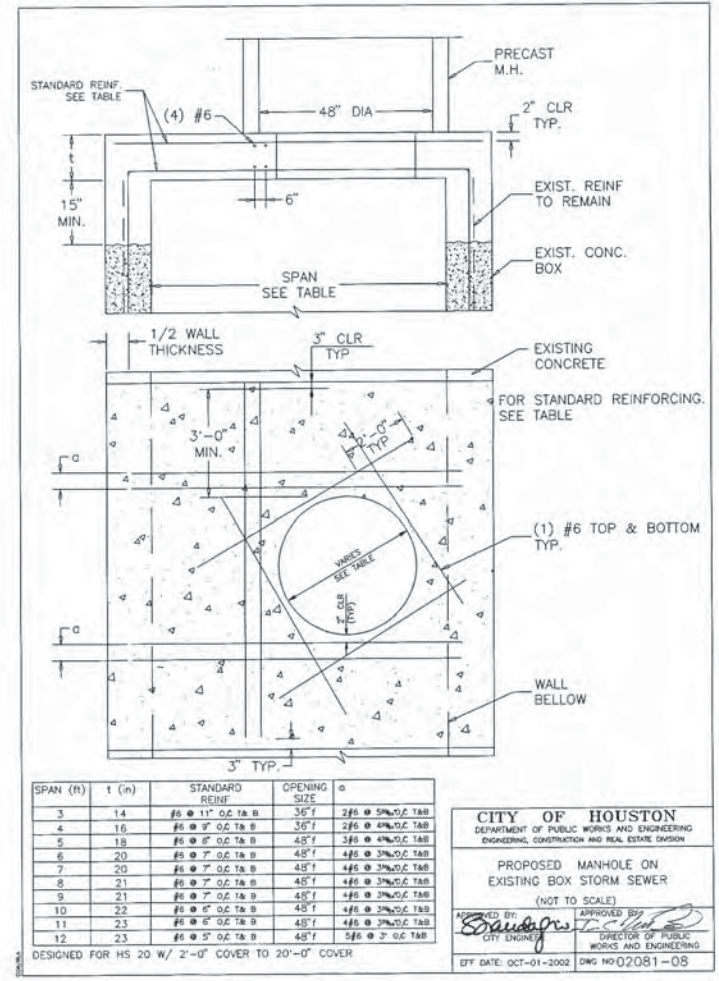
STORM SEWER DETAILS SHEET 3 OF 16

WBS NUMBER: M-000285-0001-4
DRAWING SCALE: NTS
CITY OF HOUSTON PW
JEFFREY T. HALL, P.E.
SHEET NO. 356 OF 385

55630



LATERAL CONNECTION TO EXISTING MONOLITHIC REINFORCED CONCRETE STORM SEWER
N.T.S. 1



SPAN (ft)	t (in)	STANDARD REINF.	OPENING SIZE	d
3	14	#6 @ 11" O.C. T&B	36" f	260 @ 5% O.C. TAB
4	16	#6 @ 9" O.C. T&B	36" f	260 @ 4% O.C. TAB
5	18	#6 @ 8" O.C. T&B	48" f	360 @ 4% O.C. TAB
6	20	#6 @ 7" O.C. T&B	48" f	460 @ 3% O.C. TAB
7	20	#6 @ 7" O.C. T&B	48" f	460 @ 3% O.C. TAB
8	21	#6 @ 7" O.C. T&B	48" f	460 @ 3% O.C. TAB
9	21	#6 @ 7" O.C. T&B	48" f	460 @ 3% O.C. TAB
10	22	#6 @ 6" O.C. T&B	48" f	460 @ 3% O.C. TAB
11	23	#6 @ 6" O.C. T&B	48" f	460 @ 3% O.C. TAB
12	23	#6 @ 5" O.C. T&B	48" f	560 @ 3" O.C. TAB

DESIGNED FOR HS 20 W/ 2'-0" COVER TO 20'-0" COVER

PROPOSED MANHOLE ON EXISTING BOX STORM SEWER
N.T.S. 1

SDPS
Houston Storm Drainage Program Support

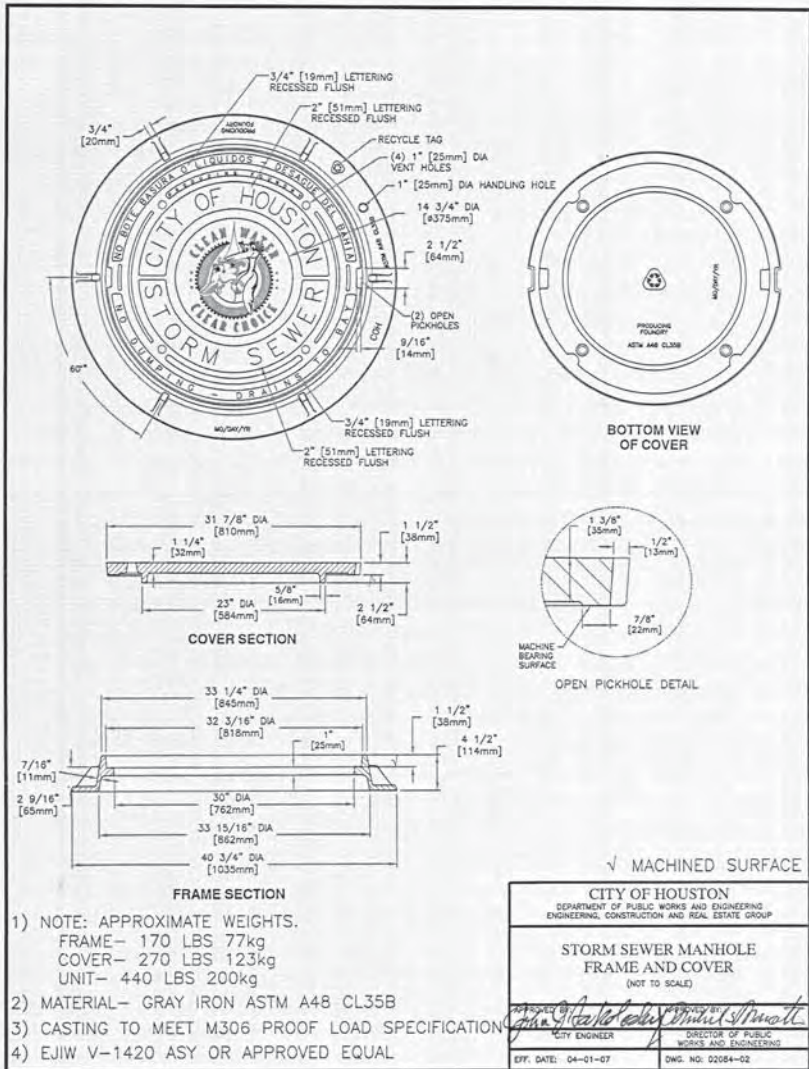
PGAL
3131 BRADPARK, SUITE 200
HOUSTON, TEXAS 77042
PHONE (713) 622-1444
FAX (713) 960-9333

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
ENGINEERING, CONSTRUCTION AND REAL ESTATE DIVISION

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING
STORM SEWER DETAILS
SHEET 4 OF 16

WBS NUMBER: M-000285-0001-4
DRAWING SCALE: NTS
CITY OF HOUSTON PM: JEFFREY T. HALL, P.E.
SHEET NO. 357 OF 385

DATE: 10/15/02 BY: J.P.H. IN: 1002081-08 (REV. 02/01/02) DWG NO: 02081-07 (REV. 04/02/02)



- NOTE: APPROXIMATE WEIGHTS.
FRAME- 170 LBS 77kg
COVER- 270 LBS 123kg
UNIT- 440 LBS 200kg
- MATERIAL- GRAY IRON ASTM A48 CL35B
- CASTING TO MEET M306 PROOF LOAD SPECIFICATION
- EJIW V-1420 ASY OR APPROVED EQUAL

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
ENGINEERING, CONSTRUCTION AND REAL ESTATE GROUP

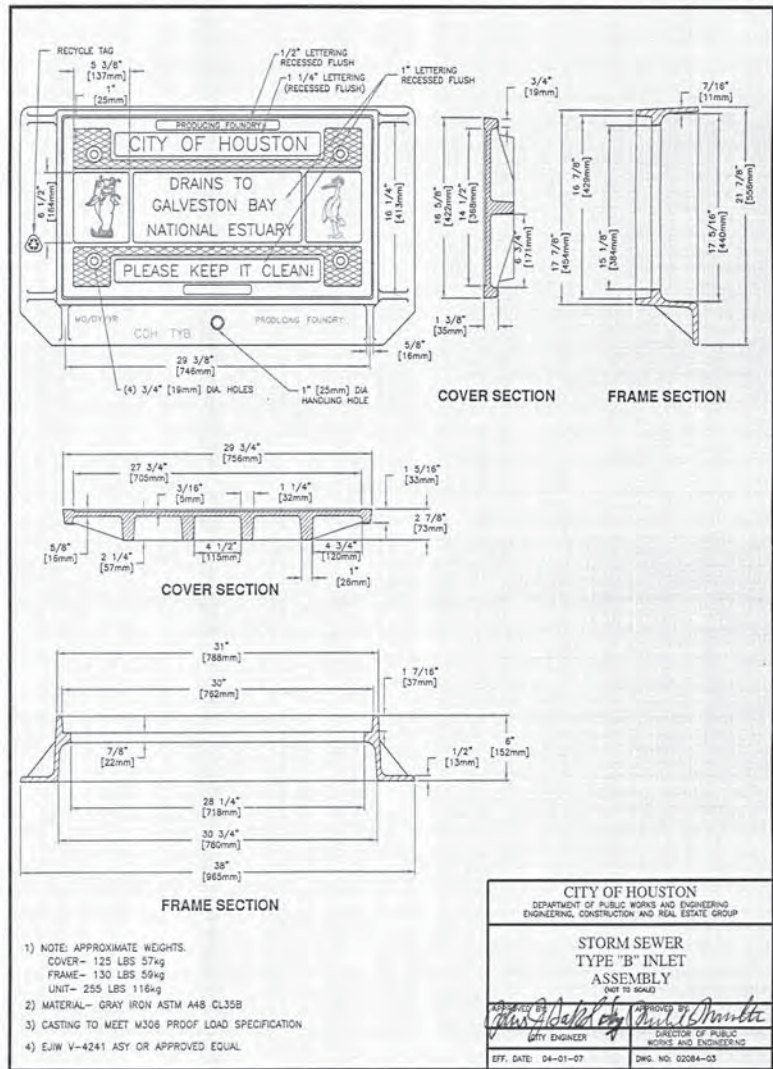
**STORM SEWER MANHOLE
FRAME AND COVER**
(NOT TO SCALE)

DESIGNED BY: *John S. Doherty*
CITY ENGINEER

APPROVED BY: *Thomas J. Smith*
DIRECTOR OF PUBLIC WORKS AND ENGINEERING

EFF. DATE: 04-01-07 DWG. NO: 02084-02

STORM SEWER MANHOLE FRAME AND COVER
N.T.S. ①



- NOTE: APPROXIMATE WEIGHTS.
COVER- 125 LBS 57kg
FRAME- 130 LBS 59kg
UNIT- 255 LBS 116kg
- MATERIAL- GRAY IRON ASTM A48 CL35B
- CASTING TO MEET M306 PROOF LOAD SPECIFICATION
- EJIW V-4241 ASY OR APPROVED EQUAL

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
ENGINEERING, CONSTRUCTION AND REAL ESTATE GROUP

**STORM SEWER
TYPE 'B' INLET
ASSEMBLY**
(NOT TO SCALE)

DESIGNED BY: *John S. Doherty*
CITY ENGINEER

APPROVED BY: *Thomas J. Smith*
DIRECTOR OF PUBLIC WORKS AND ENGINEERING

EFF. DATE: 04-01-07 DWG. NO: 02084-03

STORM SEWER TYPE 'B' INLET ASSEMBLY
N.T.S. ①

DATE: 04/01/07 FILE NO: 200504020000 DRAWING NO: JTL-STM-25-01

SDPS
Houston Storm Drainage
Program Support

PGAL
313 BRANNING, SUITE 200
HOUSTON, TEXAS 77042
PHONE (713) 822-1444
FAX (713) 988-9333

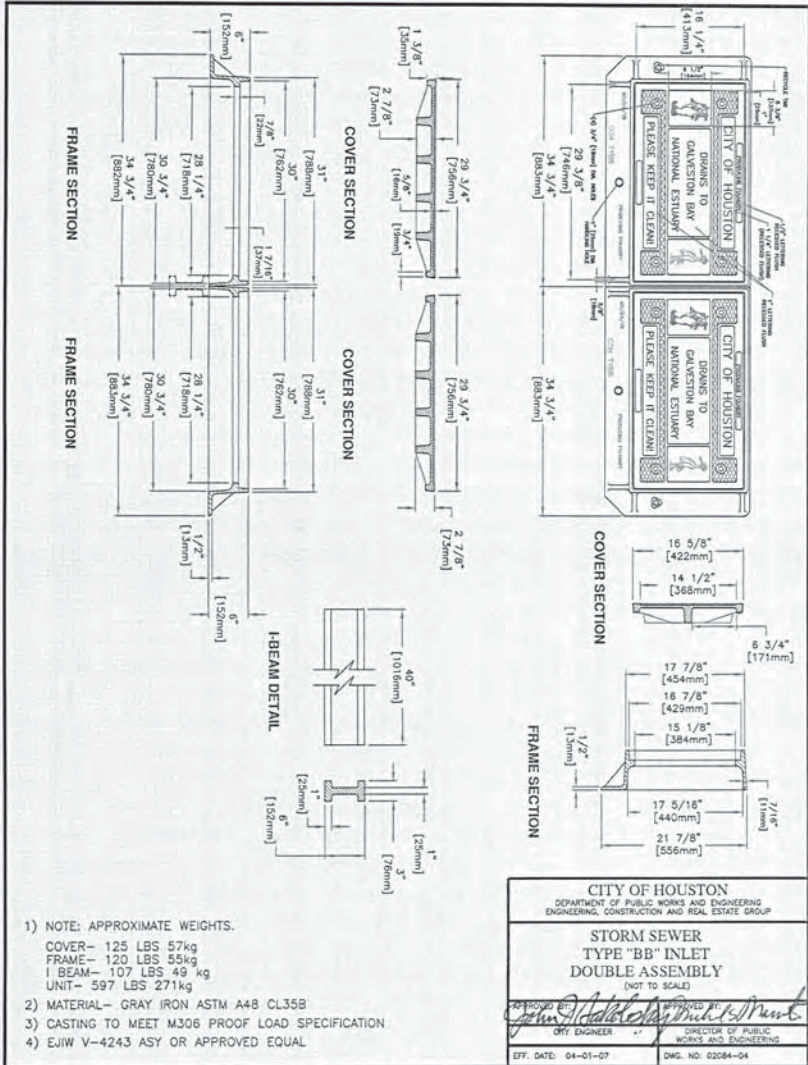
CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND
SHEPHERD PARK (CENTRAL)
DRAINAGE AND PAVING

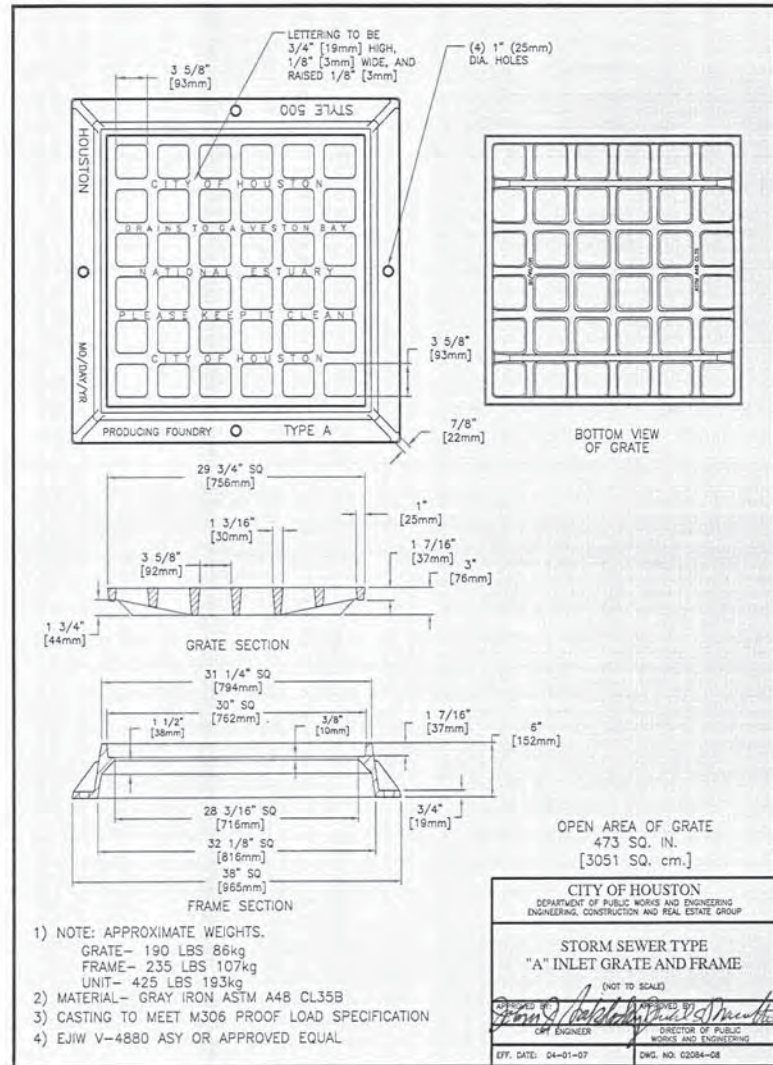
STORM SEWER DETAILS
SHEET 5 OF 16

WBS NUMBER
M-000285-0001-4
DRAWING SCALE
NTS
CITY OF HOUSTON PM
JEFFREY T. HALL, P.E.
SHEET NO. 358 OF 385

55630



STORM SEWER TYPE "BB" INLET DOUBLE ASSEMBLY
N.T.S. ①



STORM SEWER TYPE "A" INLET GRATE AND FRAME
N.T.S. ①

SDPS
Houston Storm Drainage Program Support

PGAL
DESIGN INC.
3151 BIRDAIR, SUITE 200
Houston, Texas 77042
Phone (713) 622-1448
Fax (713) 668-8333

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

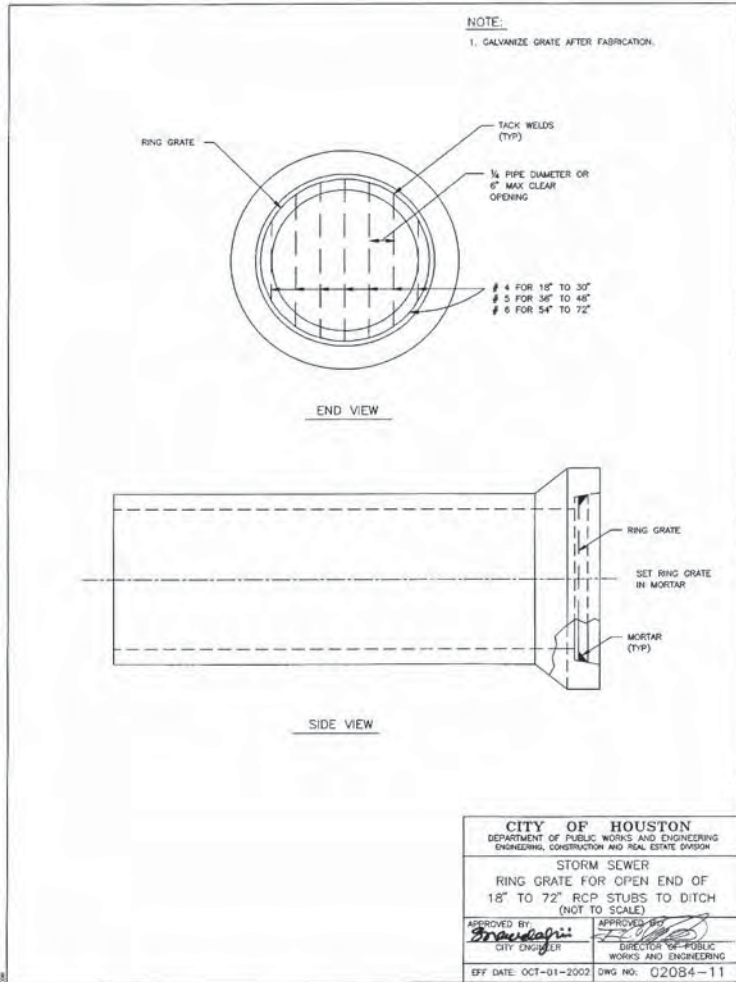
GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

STORM SEWER DETAILS SHEET 6 OF 16

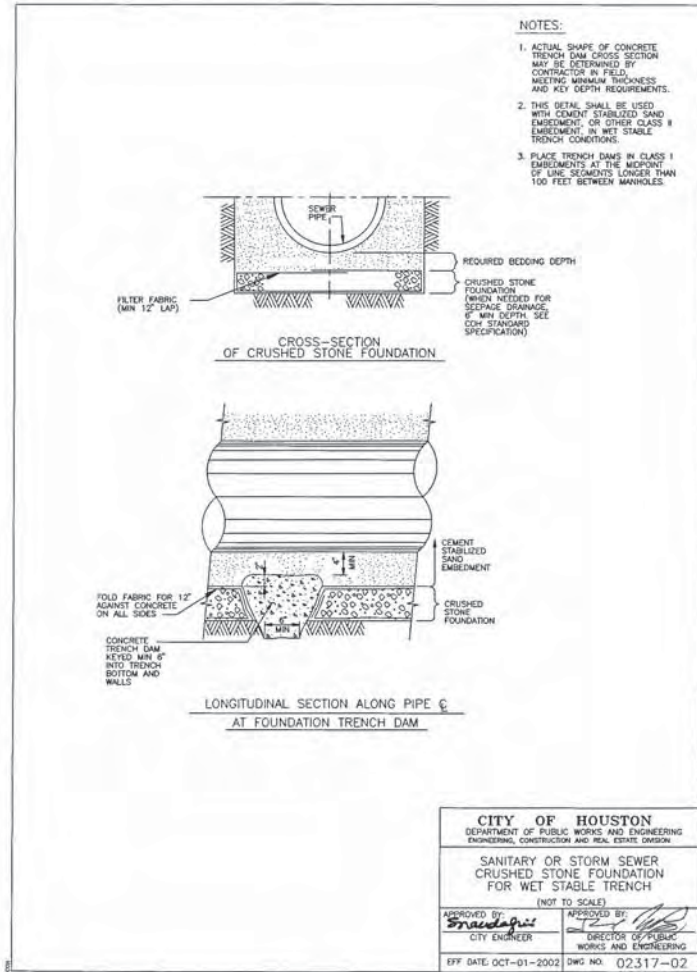
WBS NUMBER: M-000285-0001-4
DRAWING SCALE: NTS
CITY OF HOUSTON PM: JEFFREY T. HALL, P.E.
SHEET NO. 359 OF 385

55630

DATE PLOTTED: 04/02/07 10:00 AM DWG: 02084-04-08



STORM SEWER TYPE RING GRATE FOR OPEN END OF 18" TO 72" RCP STUBS TO DITCH
 N.T.S. ①



SANITARY OR STORM SEWER CRUSHED STONE FOUNDATION FOR WET STABLE TRENCH
 N.T.S. ①

SDPS
 Houston Storm Drainage Program Support

PGAL
 JAMES G. GALBRAITH
 3121 BIRCHPARK, SUITE 200
 HOUSTON, TEXAS 77042
 PHONE (713) 622-1444
 FAX (713) 948-9333

CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

STORM SEWER DETAILS
 SHEET 8 OF 16

WBS NUMBER
 M-000285-0001-4
 DRAWING SCALE
 NTS
 CITY OF HOUSTON PM
 JEFFREY T. HALL, P.E.
 SHEET NO. 361 OF 385

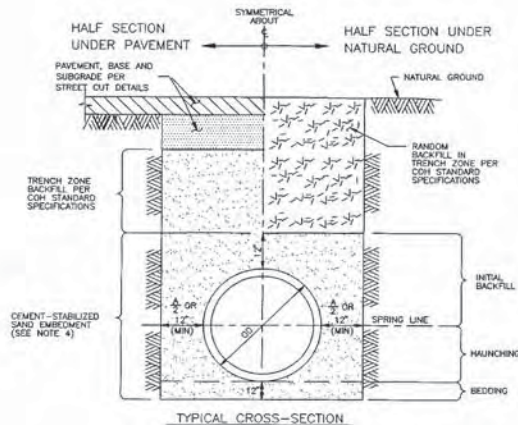
55630

DATE: 10/11/05
 FILE NO: 02084-11
 SHEET NO. 8 OF 16

NOTES:

1. THIS DETAIL MAY BE USED ONLY FOR DRY STABLE TRENCH CONDITIONS PER COH STANDARD. SEE COH STANDARD SPECIFICATION FOR REQUIREMENTS IN OTHER CONDITIONS.
2. MIN TRENCH WIDTH SHALL BE PIPE OD PLUS AN ALLOWANCE "A" FOR THE NOMINAL PIPE SIZE:

NOMINAL PIPE SIZE	"A"
18" TO 30"	24"
OVER 30"	36"
3. MAX TRENCH WIDTH SHALL BE NOT GREATER THAN MIN TRENCH WIDTH PLUS 24 INCHES, UNLESS OTHERWISE NOTED.
4. ALTERNATIVE EMBEDEDMENT BACKFILL MATERIALS FOR FORCE MAINS MAY BE ALLOWED, SEE COH STANDARD SPECIFICATIONS.



CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
 ENGINEERING, CONSTRUCTION AND REAL ESTATE DIVISION

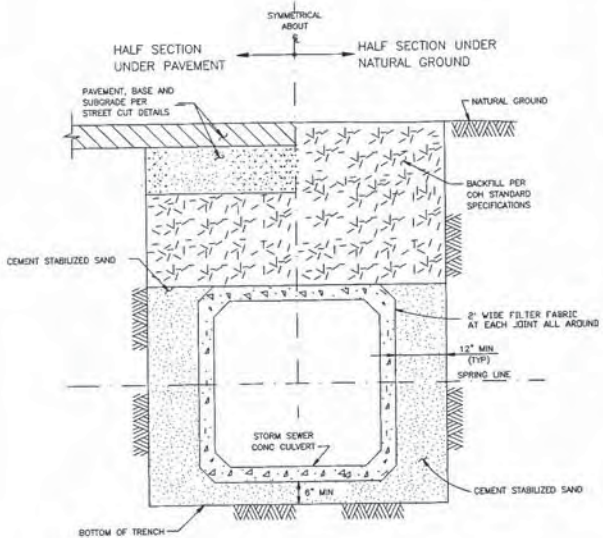
SANITARY OR STORM SEWER BEDDING AND BACKFILL FOR DRY STABLE TRENCH
 (NOT TO SCALE)

APPROVED BY: *[Signature]*
 CITY ENGINEER

APPROVED BY: *[Signature]*
 DIRECTOR OF PUBLIC WORKS AND ENGINEERING

EFF DATE: OCT-01-2002 DWG NO: 02317-03

SANITARY OR STORM SEWER BEDDING AND BACKFILL FOR DRY STABLE TRENCH 1
 N.T.S.



NOTES:

1. WHERE MULTIPLE BOX SEWERS ARE USED IN THE SAME TRENCH, MIN OUTSIDE TO OUTSIDE BOX SEWER SEPARATION SHALL BE 6"
2. SUBGRADE AND PAVEMENT PER STREET CUT DETAILS - 92951

CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
 ENGINEERING, CONSTRUCTION AND REAL ESTATE DIVISION

PRECAST CONCRETE BOX STORM SEWER BEDDING AND BACKFILL FOR DRY STABLE TRENCH
 (NOT TO SCALE)

APPROVED BY: *[Signature]*
 CITY ENGINEER

APPROVED BY: *[Signature]*
 DIRECTOR OF PUBLIC WORKS AND ENGINEERING

EFF DATE: OCT-01-2002 DWG NO: 02317-05

PRECAST CONCRETE BOX STORM SEWER BEDDING AND BACKFILL FOR DRY STABLE TRENCH 1
 N.T.S.



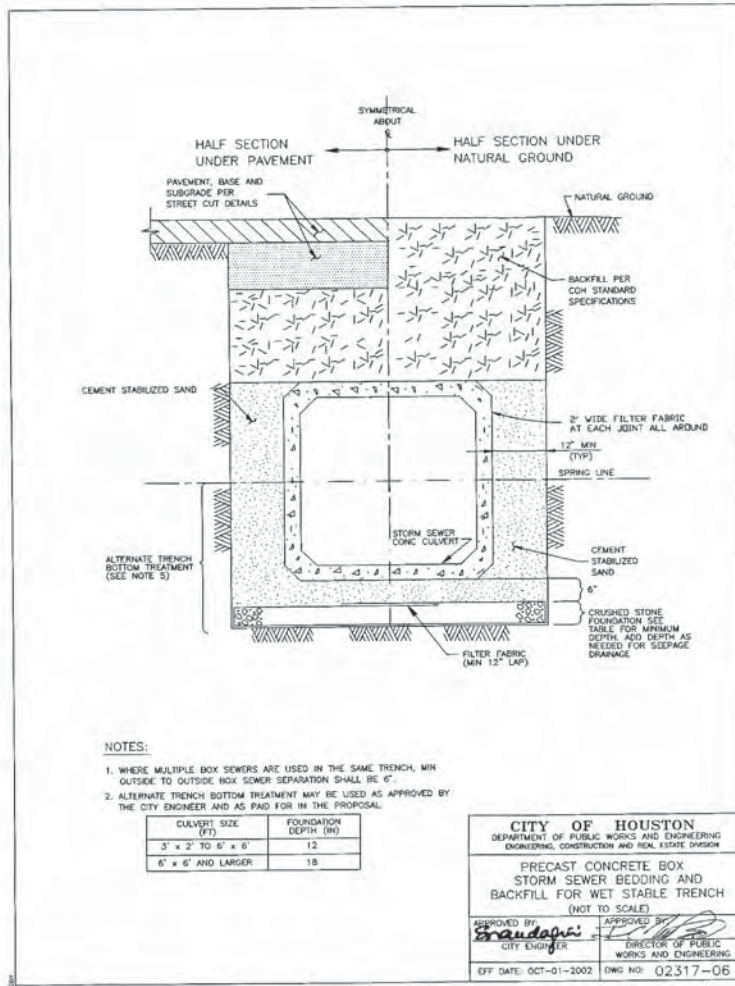
CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING
 STORM SEWER DETAILS
 SHEET 9 OF 16

WBS NUMBER
 M-000285-0001-4
 DRAWING SCALE
 NTS
 CITY OF HOUSTON PM
 JEFFREY T. HALL, P.E.
 SHEET NO. 362 OF 385

35630

DATE: 10/1/02 7:46 AM
 PLOTTED: 10/1/02 7:46 AM



NOTES:

1. WHERE MULTIPLE BOX SEWERS ARE USED IN THE SAME TRENCH, MIN OUTSIDE TO OUTSIDE BOX SEWER SEPARATION SHALL BE 6".
2. ALTERNATE TRENCH BOTTOM TREATMENT MAY BE USED AS APPROVED BY THE CITY ENGINEER AND AS PAID FOR IN THE PROPOSAL.

CULVERT SIZE (FT)	FOUNDATION DEPTH (IN)
3' x 2' TO 6' x 6'	12
6' x 6' AND LARGER	18

CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
 ENGINEERING, CONSTRUCTION AND REAL ESTATE DIVISION

**PRECAST CONCRETE BOX
 STORM SEWER BEDDING AND
 BACKFILL FOR WET STABLE TRENCH
 (NOT TO SCALE)**

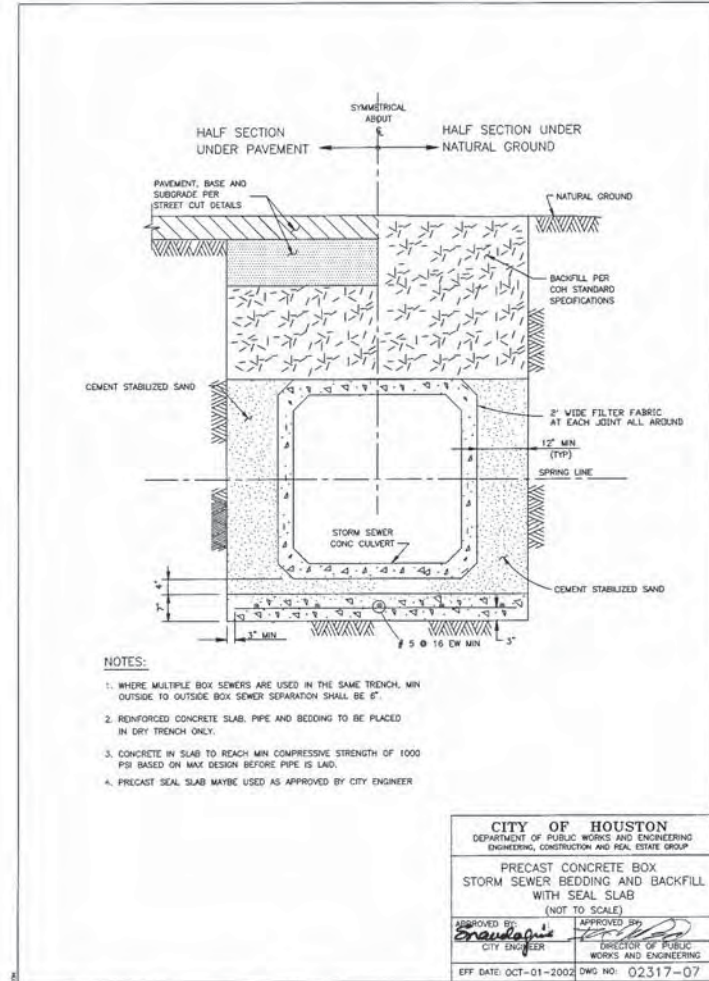
APPROVED BY: *Braudakis* CITY ENGINEER APPROVED BY: *[Signature]* DIRECTOR OF PUBLIC WORKS AND ENGINEERING

EFF DATE: OCT-01-2002 DWG NO: 02317-06

PRECAST CONCRETE BOX STORM SEWER BEDDING AND BACKFILL FOR WET STABLE TRENCH

N.T.S.

1



NOTES:

1. WHERE MULTIPLE BOX SEWERS ARE USED IN THE SAME TRENCH, MIN OUTSIDE TO OUTSIDE BOX SEWER SEPARATION SHALL BE 6".
2. REINFORCED CONCRETE SLAB, PIPE AND BEDDING TO BE PLACED IN DRY TRENCH ONLY.
3. CONCRETE IN SLAB TO REACH MIN COMPRESSIVE STRENGTH OF 1000 PSI BASED ON MAX DESIGN BEFORE PIPE IS LAID.
4. PRECAST SEAL SLAB MAYBE USED AS APPROVED BY CITY ENGINEER

CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
 ENGINEERING, CONSTRUCTION AND REAL ESTATE GROUP

**PRECAST CONCRETE BOX
 STORM SEWER BEDDING AND BACKFILL
 WITH SEAL SLAB
 (NOT TO SCALE)**

APPROVED BY: *Braudakis* CITY ENGINEER APPROVED BY: *[Signature]* DIRECTOR OF PUBLIC WORKS AND ENGINEERING

EFF DATE: OCT-01-2002 DWG NO: 02317-07

PRECAST CONCRETE BOX STORM SEWER BEDDING AND BACKFILL WITH SEAL SLAB

N.T.S.

1

SDPS
 Houston Storm Drainage
 Program Support

PGAL
 DISTRICT NO. 9-3742
 3138 BRADSHAW, SUITE 200
 HOUSTON, TEXAS 77042
 PHONE (713) 852-1444
 FAX (713) 968-8333

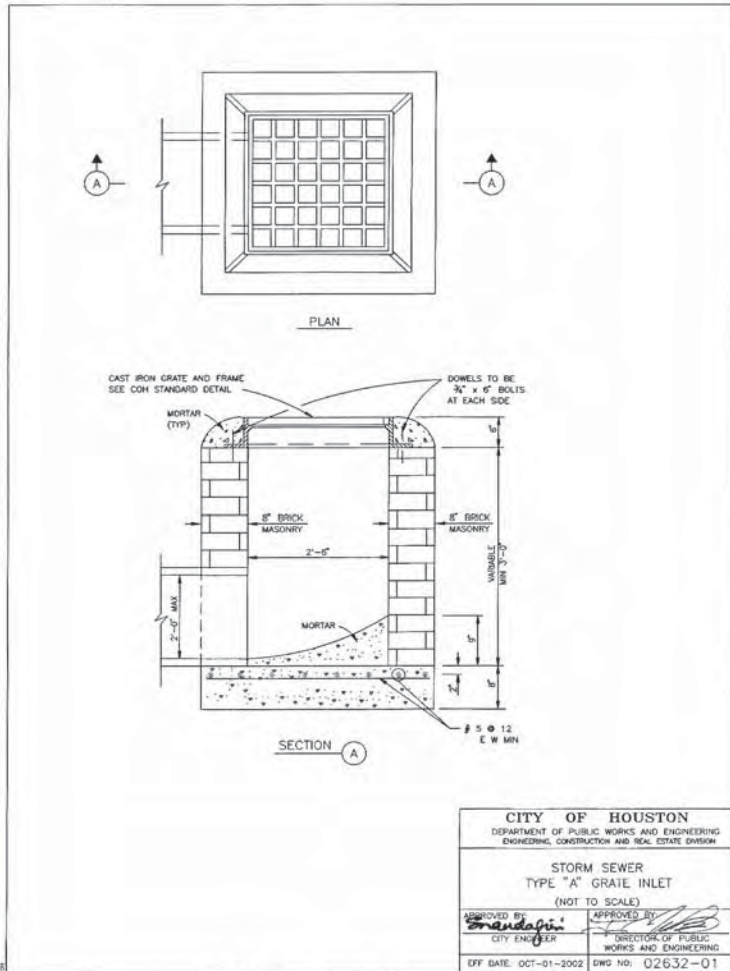
CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND
 SHEPHERD PARK (CENTRAL)
 DRAINAGE AND PAVING

STORM SEWER DETAILS
 SHEET 10 OF 16

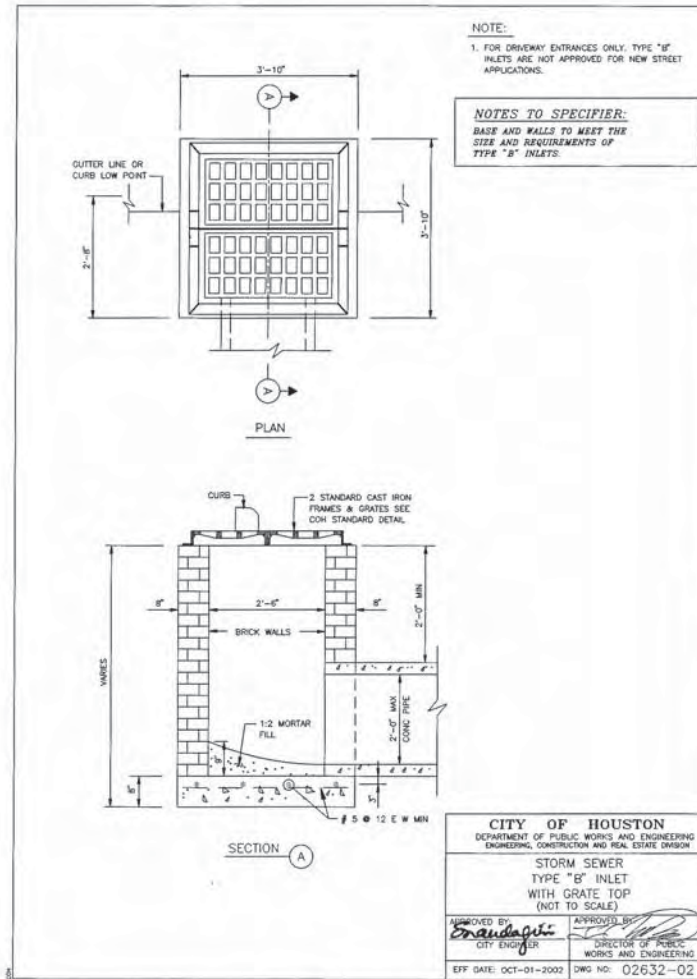
WDS NUMBER: M-000285-0001-4
 DRAWING SCALE: NTS
 CITY OF HOUSTON PM: JEFFREY T. HALL, P.E.
 SHEET NO. 363 OF 385

55630



STORM SEWER TYPE 'A' GRATE INLET
N.T.S.

1

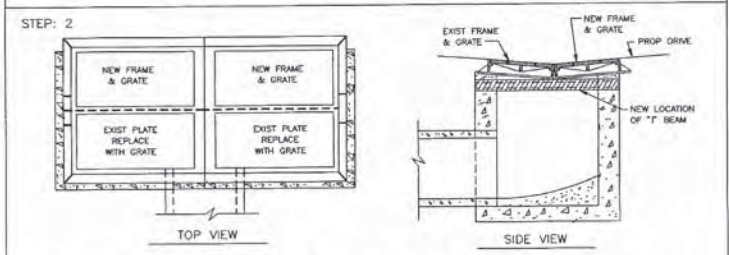
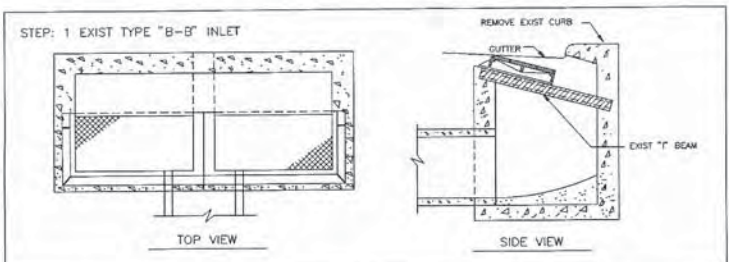


STORM SEWER TYPE 'B' INLET WITH GRATE TOP
N.T.S.

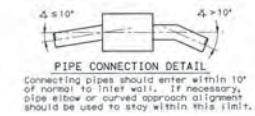
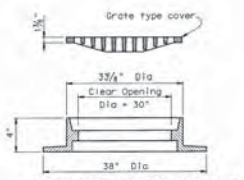
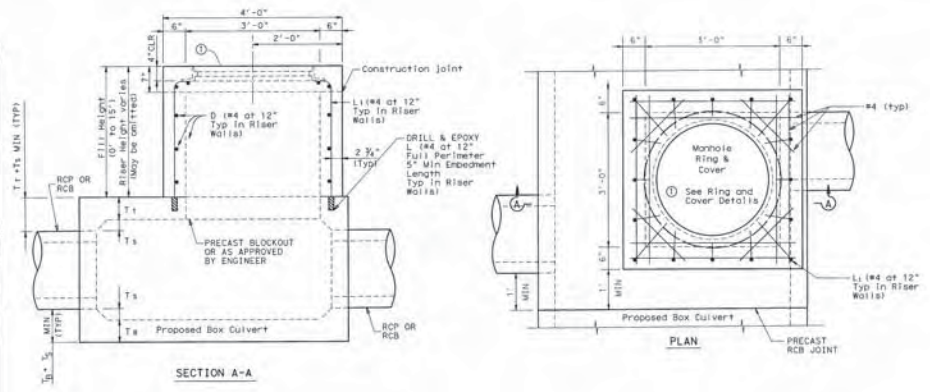
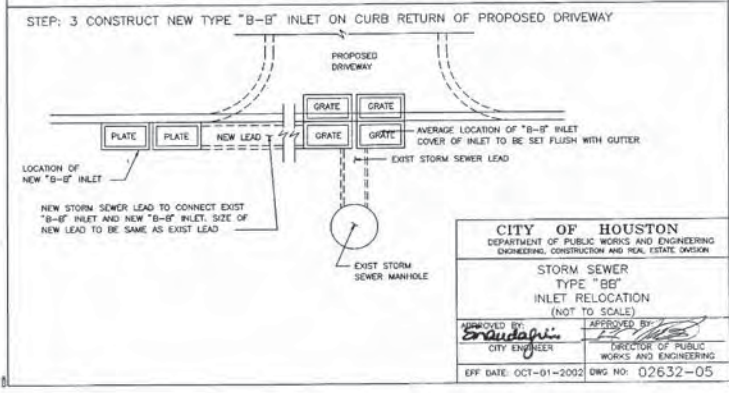
1

DATE: 9/10/05 - T.M.H. M: 10/20/05 - C.A.O. 10/20/05 - D.M. 10/20/05 - J.T.L. 10/20/05 - J.P.P.

 <p>SDPS Houston Storm Drainage Program Support</p>	
 <p>PGAL 3131 BRADSHAW, SUITE 200 HOUSTON, TEXAS 77042 PHONE (713) 622-1444 FAX (713) 968-9333</p>	 <p>COSTAS E. GEORGIU REGISTERED PROFESSIONAL ENGINEER NO. 7-3792 STATE OF TEXAS</p>
<p>SUPERVISED BY: LANDTECH E.B. NO. P-3074</p>	
<p>CITY OF HOUSTON DEPARTMENT OF PUBLIC WORKS AND ENGINEERING</p> <p>GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING</p> <p>STORM SEWER DETAILS SHEET 11 OF 16</p>	
<p>WBS NUMBER M-000285-0001-4 DRAWING SCALE N.T.S. CITY OF HOUSTON PM JEFFREY T. HALL, P.E. SHEET NO. 364 OF 385</p>	<p>35630</p>



1. AFTER REMOVING EXIST CURB, RAISE EXIST "T" BEAM TO GRADE AND RESET EXIST FRAMES.
2. REPLACE EXIST PLATES WITH GRATES.
3. ADD NEW FRAMES AND GRATES NEXT TO EXIST FRAMES.
4. BACKFILL INLET TO A POINT ONE FOOT BEHIND THE CURB WITH 1 SACK/TON CEMENT STABILIZED SAND.



GENERAL NOTES:

Unless otherwise shown in the plans, payment will be made for each manhole of the type 5.

In areas of conflict between reinforcing steel, blockouts, pipes, anchor bolts or other reinforcing steel, the reinforcement shall be bent or adjusted to clear as directed by the Engineer.

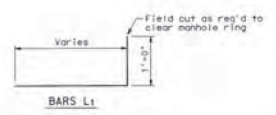
The riser may be constructed of reinforced concrete as shown.

All reinforcing steel shall be #4 unless otherwise noted.

Ring and cover shall conform to the requirements of AASHTO M306, "Standard Specification for Drainage Structure Castings". Materials shall conform to ASTM A48, Class 35B for gray iron castings or ASTM A536, Grade 65-45-12 for ductile iron castings. Aluminum alloy castings shall not be permitted.

All concrete shall be Class "A", (f'c = 3000 psi).

Ring frame and grate shall be East Jordan Iron Works model v-1600-4 and v-3600-4, or approved equivalent respectively. Bolt frame to grate.



TY A INLET FOR BOX CULVERT (SHALLOW SWALES)

N. T. S.

STORM SEWER TYPE "B-B" INLET RELOCATION

N.T.S.

SDPS
Houston Storm Drainage Program Support

PGAL
3131 BRAMPARK, SUITE 200
HOUSTON, TEXAS 77002
PHONE (713) 822-1444
FAX (713) 968-9333

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

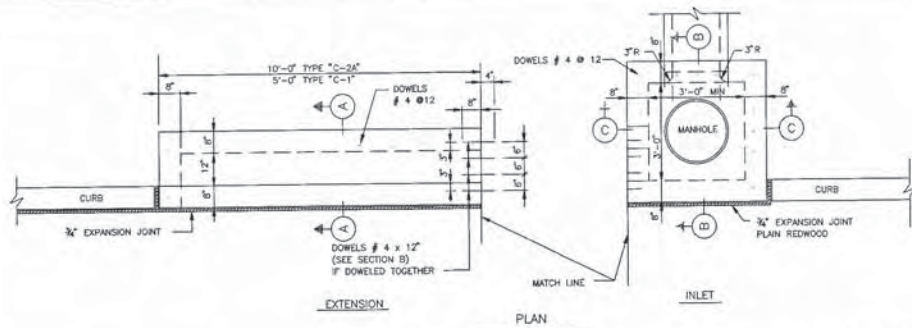
GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

STORM SEWER DETAILS SHEET 13 OF 16

WDS NUMBER: M-000285-0001-4
DRAWING SCALE: NTS
CITY OF HOUSTON PM: JEFFREY T. HALL, P.E.
SHEET NO. 366 OF 385

55630

DATE: 10/16/2005 10:07:09 AM
DRAWING: C:\WORK\02632\DWG\02632-05.DWG

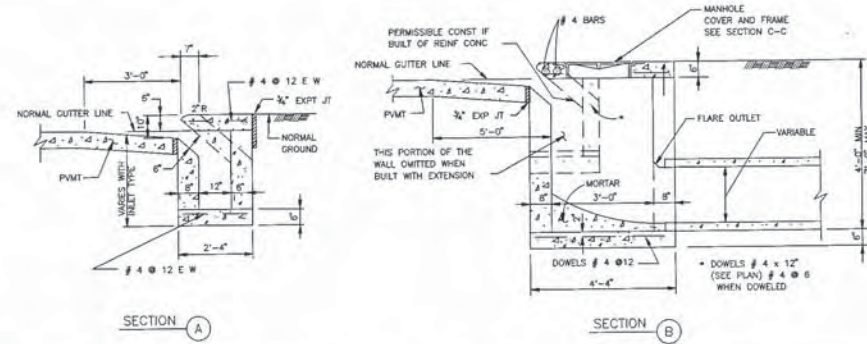
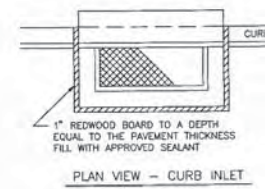
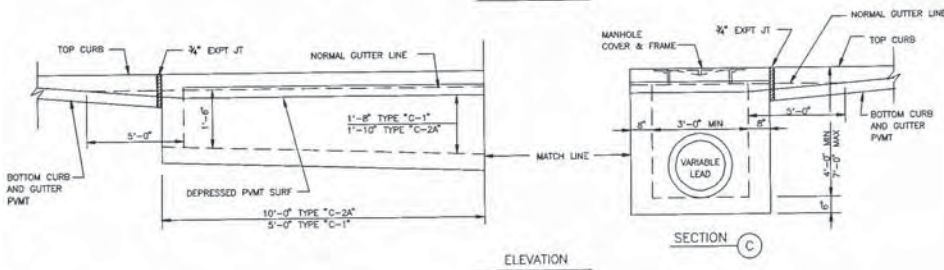


GENERAL NOTES:

- TYPE "C-1" INLET WITH ONE EXTENSION (5'-0" LONG)
- TYPE "C-2" INLET WITH ONE EXTENSION ON EACH SIDE
- TYPE "C-2A" INLET WITH DOUBLE EXTENSION (10'-0" LONG)

NOTES:

1. FOR TYPE "C-2A" INLETS PROVIDE A CENTER #4X12 COLUMNS IN THE CURB LINE BETWEEN ALL EXTENSIONS.
2. WALLS TO BE 6" IF BUILT WITH REINFORCED CONCRETE. WHEN BUILT WITH BRICK WALL, USE STRAIGHT WALL IN BACK WITH 6" REINFORCED CONCRETE TOP SLABS DOWELED INTO BRICK WALLS WITH #4 X 2' #12.



CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
 ENGINEERING, CONSTRUCTION AND REAL ESTATE DIVISION

STORM SEWER
 TYPE "C-1", "C-2"
 AND "C-2A" INLETS
 (NOT TO SCALE)

APPROVED BY: *[Signature]*
 CITY ENGINEER

APPROVED BY: *[Signature]*
 DIRECTOR OF PUBLIC WORKS AND ENGINEERING

EFF DATE: 07-01-2002 DWG NO: 02632-06



CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

STORM SEWER DETAILS
 SHEET 14 OF 16

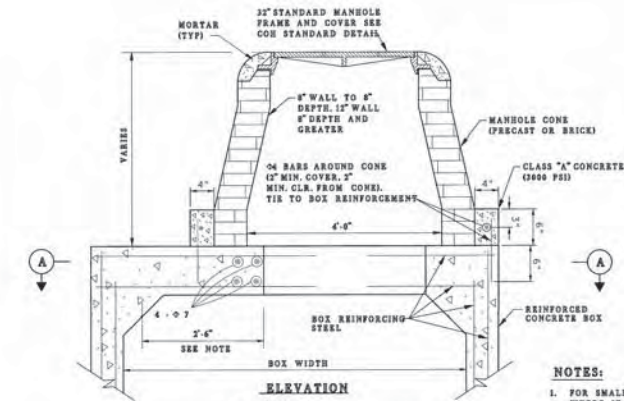
WDS NUMBER
 M-000285-0001-4

DRAWING SCALE
 NTS

CITY OF HOUSTON PW
 JEFFREY T. HALL, P.E.
 SHEET NO. 367 OF 385

55630

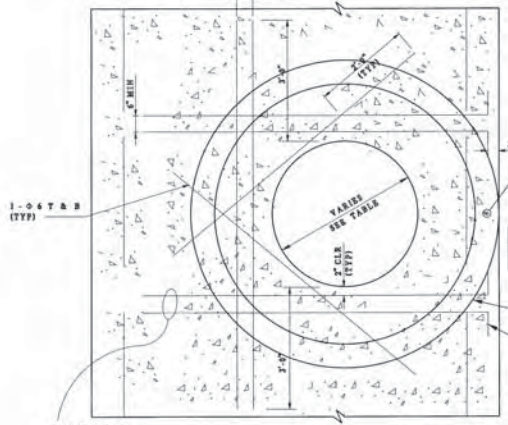
DATE: 6/19/02
 DRAWN BY: JTB
 CHECKED BY: JTB
 DESIGNED BY: JTB
 SCALE: AS SHOWN



- NOTES:**
1. FOR SMALLER BOX SEWER WIDTHS, WHERE IT IS NOT POSSIBLE TO EXTEND REINFORCING STEEL 2'-6\"/>
 2. MANHOLE CAN BE PRECAST OR BRICK.
 3. TIE THE PROP COLLAR STEEL TO LONGITUDINAL AND ELIPTICAL STEEL WHERE APPLICABLE.
 4. ALL REINFORCING STEEL TO CONFORM TO ASTM A-615, GRADE 48. PROVIDE 35-BAR DIAMETER LAPS FOR CYLINDRICAL STEEL. ALL LONGITUDINAL STEEL SHOULD BE OF ADEQUATE LENGTH TO PROVIDE LAP TIE TO REINFORCING STEEL.

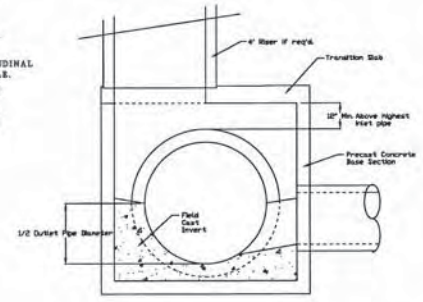
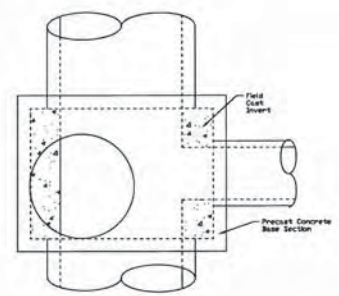
TABLE
BOX WIDTH VS OPENING SIZE

BOX WIDTH	OPENING SIZE
48\"/>	36\"/>
GREATER THAN 48\"/>	36\"/>



*CONTRACTOR TO PROVIDE PRECAST MANUFACTURING SHOP DRAWINGS SHOWING MANHOLE CONNECTIONS AT BOX CULVERT

STORM SEWER MANHOLE FOR PROPOSED CONCRETE BOX SEWER (TY S MANHOLE)
(REVISED CITY OF HOUSTON DETAIL NO. 02081-04)
N. T. S.



JUNCTION BOX MANHOLE
N. T. S.

DETAIL-2 NOTES:

- A. WHEN PRECAST, SQUARE OR RECTANGULAR STRUCTURES ARE SUBSTITUTED FOR ROUND STORM SEWER MANHOLES, CONSTRUCT INVERT CHANNELS TO PROVIDE SMOOTH FLOW TRANSITION WATERWAY WITH NO DISRUPTION OF FLOW AT PIPE-MANHOLE CONNECTIONS. CONFORM TO FOLLOWING CRITERIA:
1. SLOPE OF INVERT BENCH: 1 INCH PER FOOT MINIMUM; 1 1/2 INCHES PER FOOT MAXIMUM
 2. DEPTH OF BENCH TO INVERT: ONE HALF OF LARGEST PIPE DIAMETER
 3. INVERT SLOPE THROUGH MANHOLE: 0.10 FOOT DROP ACROSS MANHOLE WITH SMOOTH TRANSITION OF INVERT THROUGH MANHOLE, UNLESS OTHERWISE INDICATED ON DRAWINGS.
- B. FORM INVERT CHANNELS WITH CONCRETE, AFTER ALL CONNECTIONS HAVE BEEN MADE
1. USE 5 SACK PREMIX (BAG) CONCRETE OR CLASS A CONCRETE FOR INVERTS, WITH MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI.
- C. PAYMENT FOR INVERT WORK IS INCIDENTAL TO COST OF MANHOLE.

SDPS
Houston Storm Drainage Program Support

PGAL
3131 BIRCHPARK, SUITE 200
HOUSTON, TEXAS 77042
PHONE (713) 623-1444
FAX (713) 968-9333

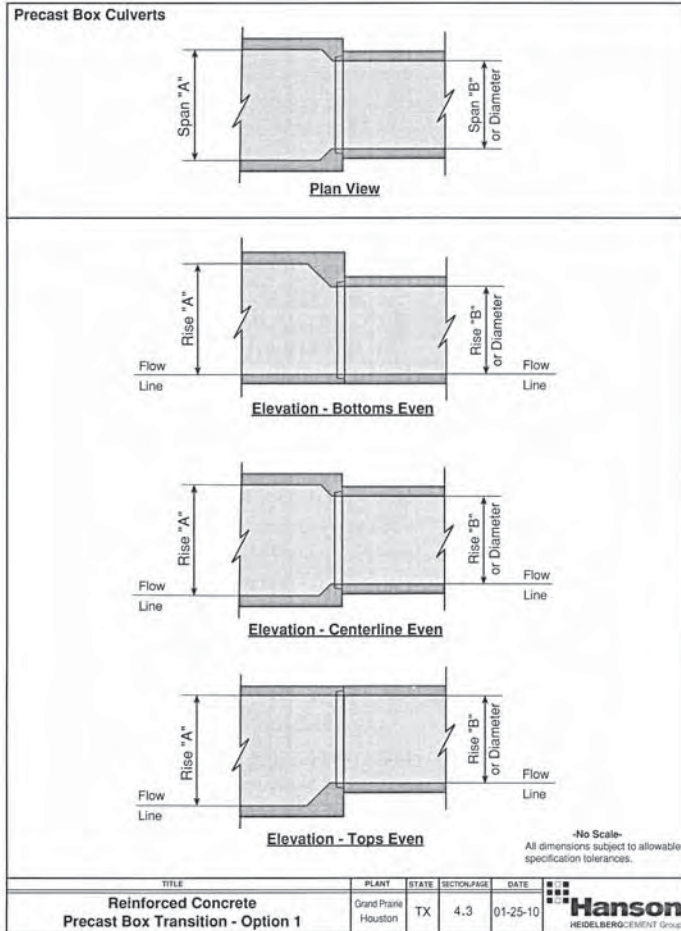
CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

STORM SEWER DETAILS
SHEET 15 OF 16

WBS NUMBER: M-000285-0001-4
DRAWING SCALE: N.T.S.
CITY OF HOUSTON PM: JEFFREY T. HALL, P.E.
SHEET NO. 368 OF 385

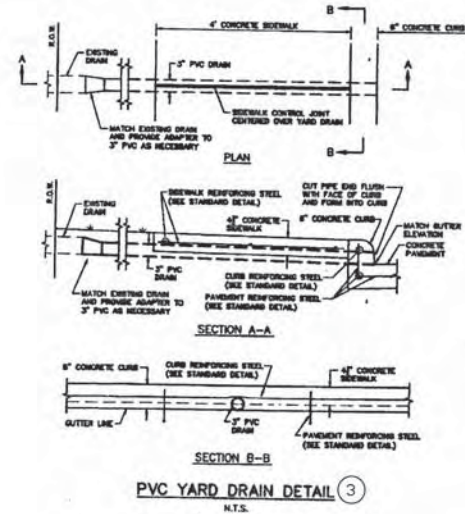
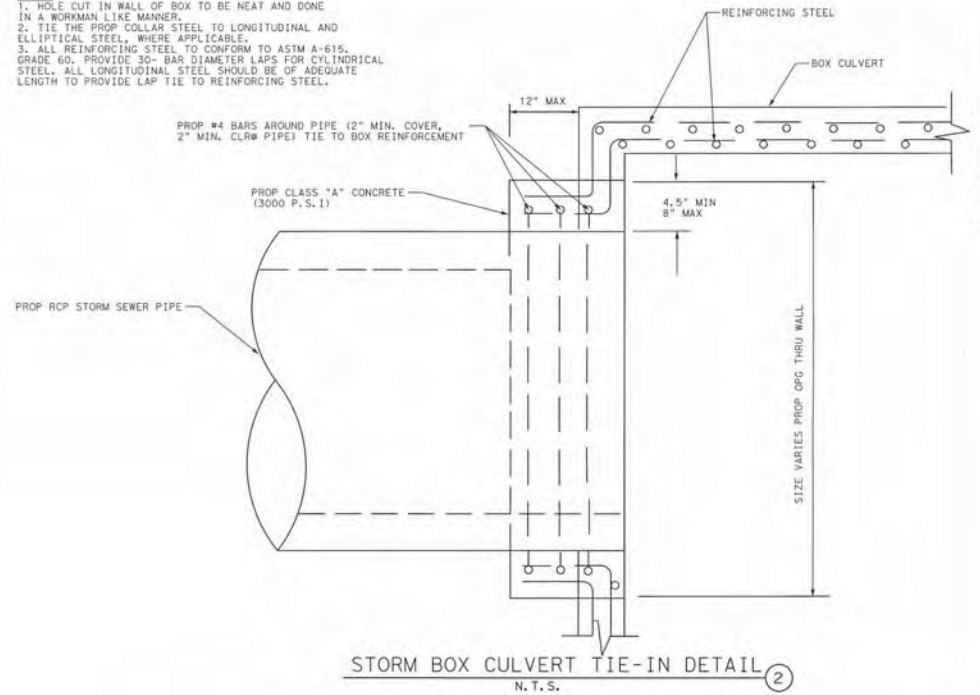
DATE: 01/16/05 2:56:07 PM
PROJECT: HOUSTON STORM DRAINAGE PROGRAM DETAIL STD 05.dwg



PRECAST BOX TRANSITION
N. T. S. ①

NOTES

- HOLE CUT IN WALL OF BOX TO BE NEAT AND DONE IN A WORKMAN-LIKE MANNER.
- TIE THE PROP COLLAR STEEL TO LONGITUDINAL AND ELLIPTICAL STEEL, WHERE APPLICABLE.
- ALL REINFORCING STEEL TO CONFORM TO ASTM A-615, GRADE 60. PROVIDE 30- BAR DIAMETER LAPS FOR CYLINDRICAL STEEL. ALL LONGITUDINAL STEEL SHOULD BE OF ADEQUATE LENGTH TO PROVIDE LAP TIE TO REINFORCING STEEL.



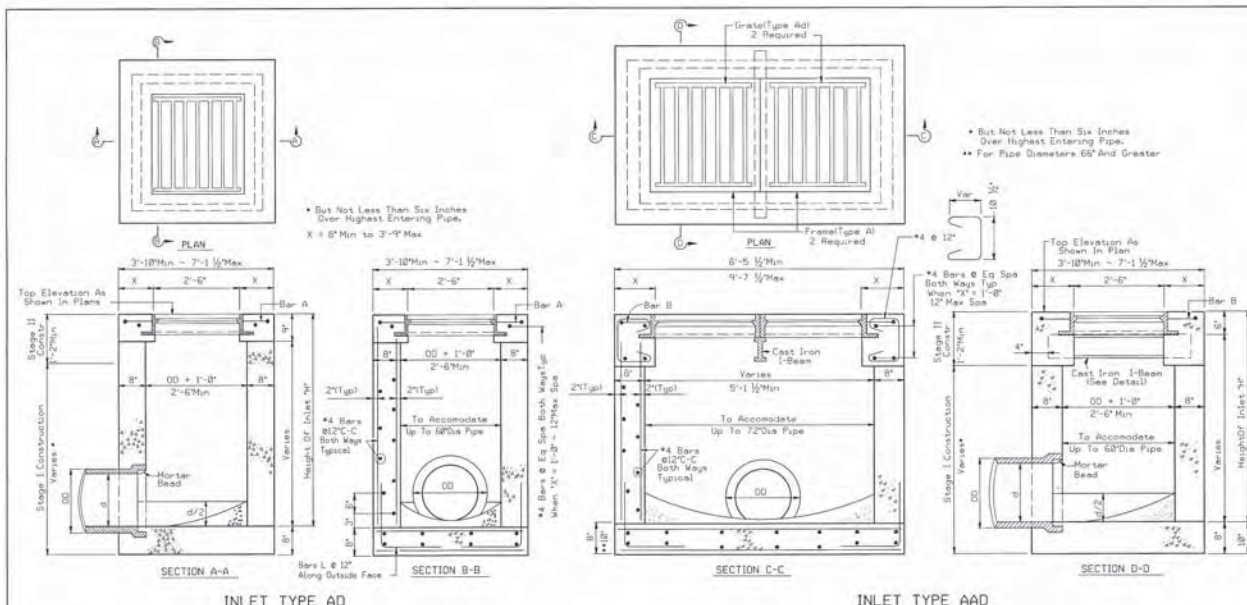
CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

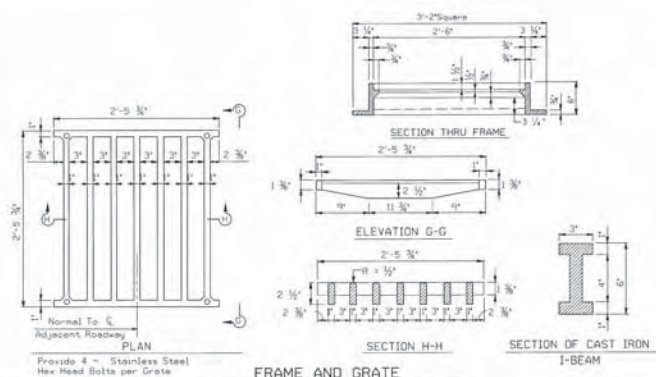
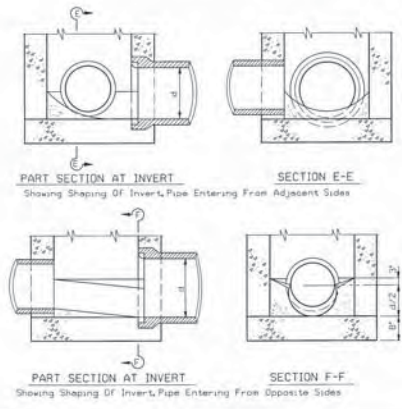
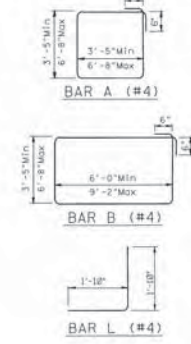
STORM DETAILS
SHEET 16 OF 16

WBS NUMBER	M-000285-0001-4
DRAWING SCALE	N.T.S.
CITY OF HOUSTON PM	JEFFREY T. HALL, P.E.
SHEET NO.	369 OF 385

DATE: 04/20/2010 7:40:09 AM
PROJECT: GRAND PRAIRIE DRAINAGE IMPROVEMENT PROJECT - STW 46



GENERAL NOTES:
 Alternate designs shall conform to special provisions for Item 465.
 Type AD Inlet contains a single frame with grate. Type AAD Inlet contains a double frame and double grate with an I-beam.
 Frames and Grates may be gray cast iron.
 The Furnishing and Installation of Cast Iron I-Beams Shall Be Considered Incidental to Inlet (Comp'l) (Ty AAD) Or Inlet Stage III (Ty AAD) As The Case May Be.
 Where Size Of Pipes Passing Thru Inlet Exceeds 30", Increase Inside Width To Diameter Of Pipe Plus 1'-0" (OO = 1'-0")
 Cast Iron Manhole Stages (See Manhole Details) Spaced At 16' Centers And Located On Wall Specified By The Engineer. Shall Be Provided And Installed Where 'D' Exceeds 5'-0".
 See Standard or Detail Sheet For Excavation and Backfill Diagrams.
 Type AD & AAD Inlets Shall Be Built To Stage I And Finished After All Grading Operations Are Substantially Completed.
 Shop Drawings Will Be Required For Precast Construction Of Inlets.
 Upon installation of the grates the threads of the bolts shall be coated with thread lock type adhesive (Loctite or equal). Reapply thread lock adhesive each time grates are removed. Bolted grates and frames are a matched set, do not unbolt without 'Match Marking' to that grates and frames are re-installed as originally built.



FRAME AND GRATE
 Type AD - Neenah No.3418 or EJM No.V-4888-2
 Type AAD - Neenah No.3418-2 or EJM No.V-4881-2
 d = Diameter
 R = Radius

NOT FOR TRAFFIC LOADS

Texas Department of Transportation
Houston District

INLETS TYPE AD & AAD
HIL-AD/AAD

FILED	STUD. DEN	DATE	BY	PROJECT NO.	SHEET
TXDOT	FEB 2010				

SDPS
Houston Storm Drainage Program Support

PGAL
3131 BRADSHAW, SUITE 200
HOUSTON, TEXAS 77042
PHONE (713) 622-1444
FAX (713) 969-9333

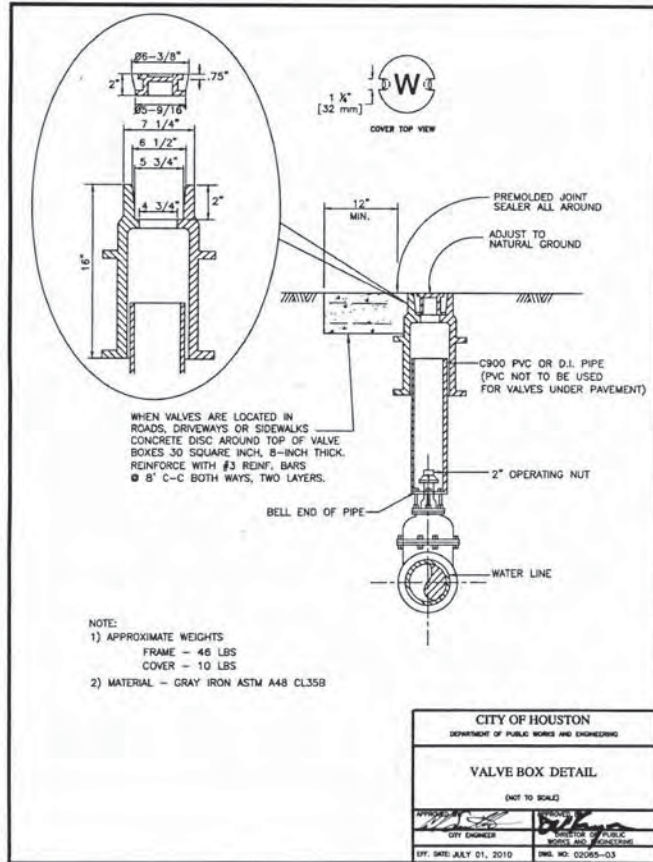
CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING
STORM SEWER DETAILS-TXDOT
SHEET 2 OF 2

WBS NUMBER
M-000285-0001-4
DRAWING SCALE
NTS
CITY OF HOUSTON PM
JEFFREY T. HALL, P.E.
SHEET NO. 371 OF 385

55630

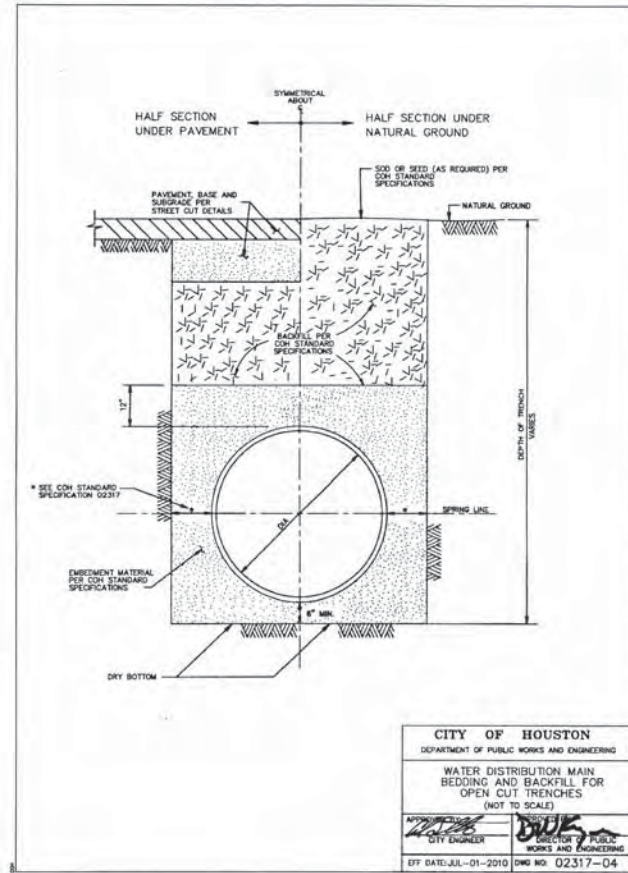
DATE: 01/20/2005 10:46 AM
AUTOCAD: 2004/02/09 10:46 AM
DRAWING: 004-DTL-STM-457

5/10/05, 5:06



CITY OF HOUSTON DEPARTMENT OF PUBLIC WORKS AND ENGINEERING	
VALVE BOX DETAIL	
(NOT TO SCALE)	
 CITY ENGINEER	 DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFF. DATE: JULY 01, 2010	DWG. NO. 02065-03

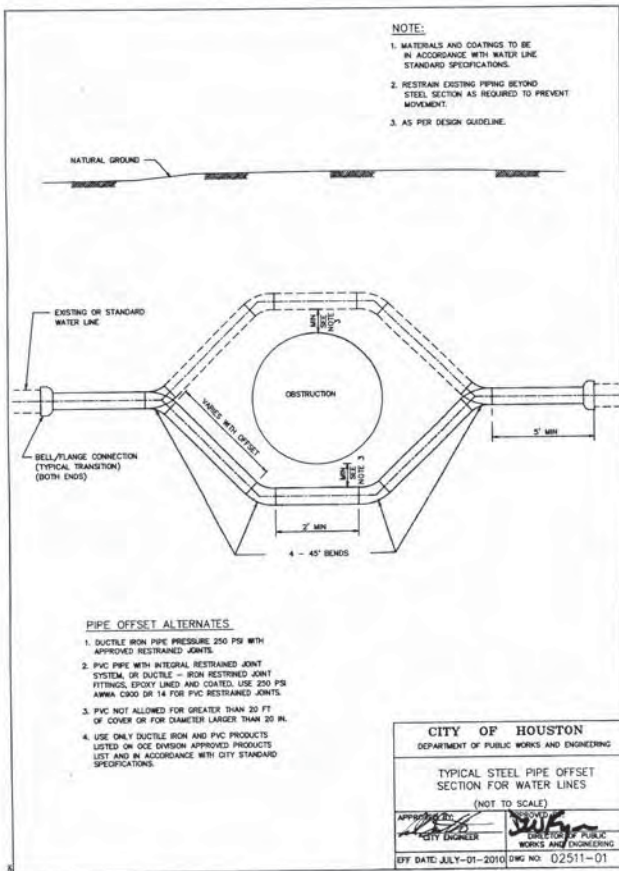
VALVE BOX DETAIL ①
N.T.S.



CITY OF HOUSTON DEPARTMENT OF PUBLIC WORKS AND ENGINEERING	
WATER DISTRIBUTION MAIN BEDDING AND BACKFILL FOR OPEN CUT TRENCHES	
(NOT TO SCALE)	
 CITY ENGINEER	 DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFF. DATE: JUL-01-2010	DWG. NO. 02317-04

WATER DISTRIBUTION MAIN BEDDING AND BACKFILL FOR OPEN CUT TRENCHES ②
N.T.S.

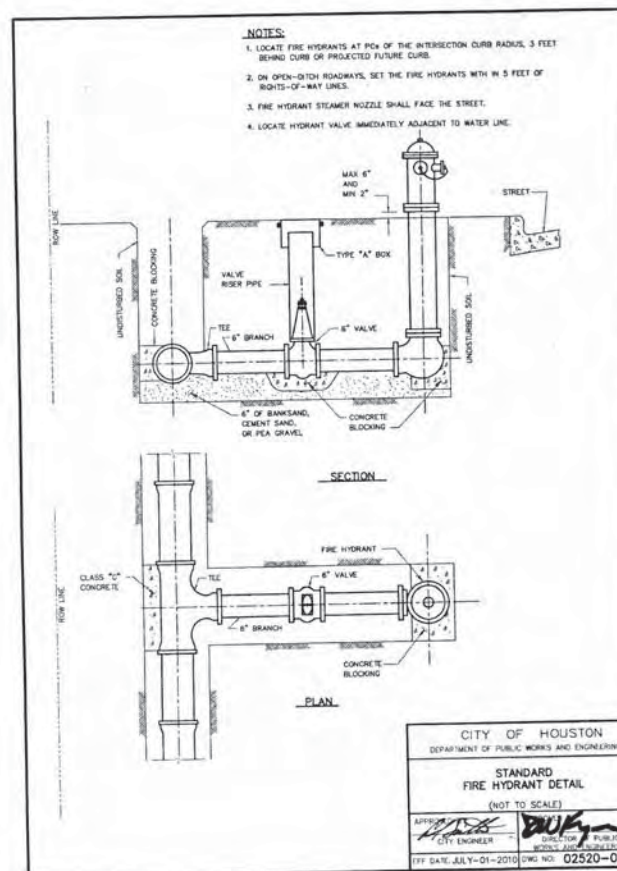
 SDPS Houston Storm Drainage Program Support	
 PGAL INC. 5552 3121 BRADPARK, SUITE 200 Houston, Texas 77042 Phone (713) 652-1444 Fax (713) 988-9333	 WILLIAM H. PAE 19472 <small>THE SEAL OF THE CITY OF HOUSTON, TEXAS 1837-1967</small>
SUPERVISED BY: LANDTECH P.E. NO. 19-0578	
CITY OF HOUSTON DEPARTMENT OF PUBLIC WORKS AND ENGINEERING GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING WATER LINE DETAILS SHEET 1 OF 6	
WBS NUMBER M-000285-0001-4 DRAWING SCALE NTS CITY OF HOUSTON PM JEFFREY T. HALL, P.E. SHEET NO. 372 OF 385	55630



TYPICAL PIPE OFFSET SECTION FOR WATER MAINS

N.T.S.

1



STANDARD FIRE HYDRANT DETAIL

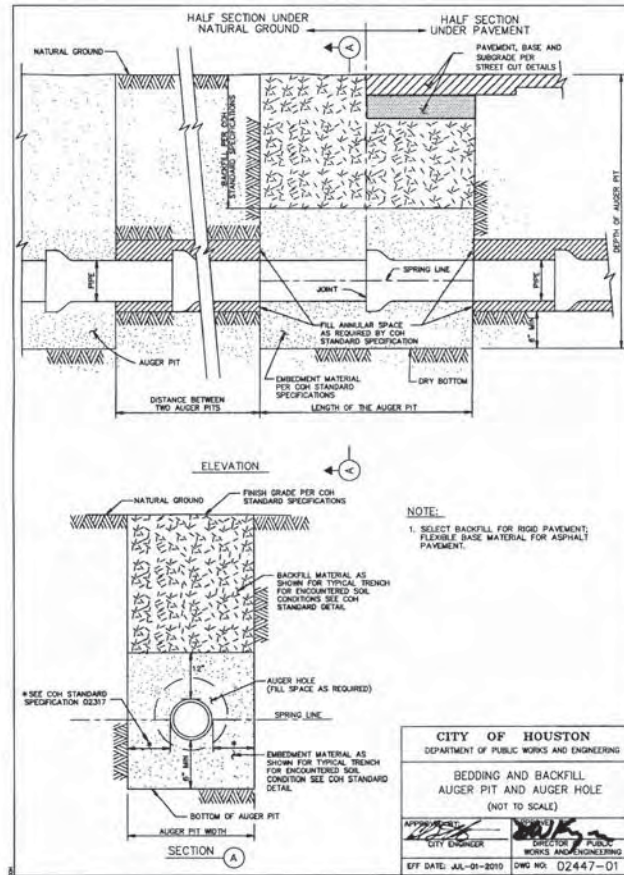
N.T.S.

2

DATE: 6/20/2005 7:46:50 AM
 RW:2005AS-CAD-0000 D:\C:\DWG\02511.DWG

CITY OF HOUSTON DEPARTMENT OF PUBLIC WORKS AND ENGINEERING GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING WATER LINE DETAILS SHEET 2 OF 6	
WBS NUMBER M-000285-0001-4 DRAWING SCALE NTS CITY OF HOUSTON PW JEFFREY T. HALL, P.E. SHEET NO. 373 OF 385	

SDPS 6/15/2005 T-0202 M
 A:\0202045-0202000_0202045\0202045\DWG\WTL_01.dwg



BEDDING AND BACKFILL AUGER PIT AND AUGER HOLE

N.T.S.

1



PGAL

STATE OF TEXAS
 WILLIAM K. PAGE
 1947

STATE OF TEXAS
 JAMES H. HARRIS
 1947

3131 BIRMAHAYNS, SUITE 200
 Houston, Texas 77042
 Phone (713) 622-1444
 Fax (713) 940-9333

SURVEYED BY: LANDTECH
 PE NO. H-2576

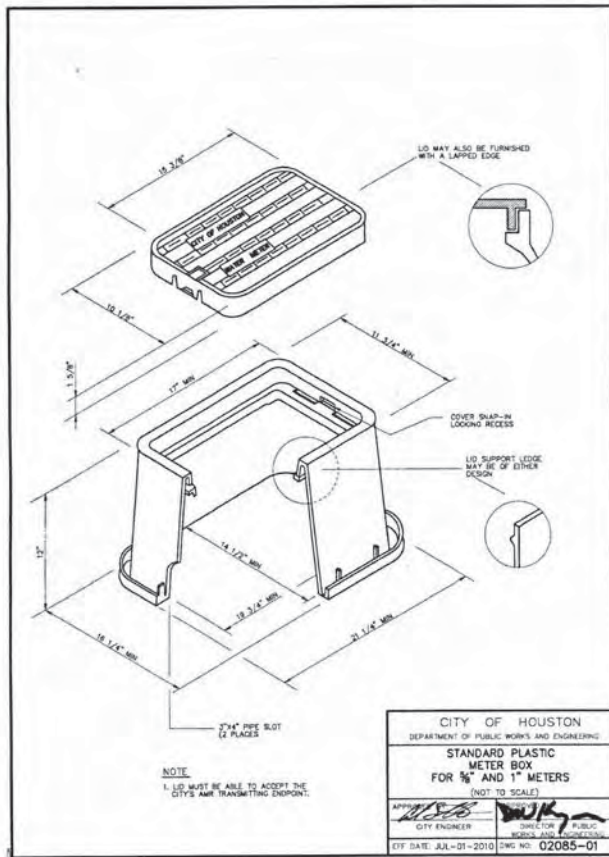
CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

WATER LINE DETAILS
 SHEET 3 OF 6

WBS NUMBER	M-000285-0001-4
DRAWING SCALE	NTS
CITY OF HOUSTON PM	JEFFREY T. HALL, P.E.
SHEET NO.	374 OF 385

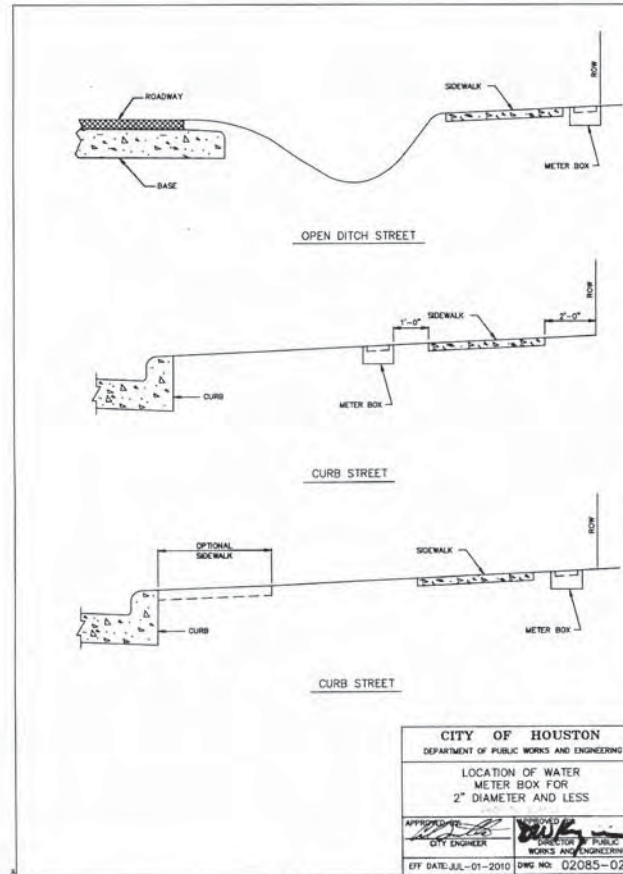
55630



STANDARD PLASTIC METER BOX FOR 5/8" AND 1" METERS

N.T.S.

1



LOCATION OF WATER METER BOX FOR 2" DIAMETER AND LESS

N.T.S.

2



CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

WATER LINE DETAILS SHEET 4 OF 6

WBS NUMBER	M-000285-0001-4
DRAWING SCALE	NTS
CITY OF HOUSTON PW	JEFFREY T. HALL, P.E.
SHEET NO. 375 OF 385	

55630

PIPE TAPPING SCHEDULE				
WATER MAIN TYPE AND DIAMETER	SERVICE SIZE			
	3/4"	1"	1 1/2"	2"
4" CAST IRON OR DUCTILE IRON	DSS, WBSS	DSS, WBSS	DSS, WBSS	DSS, WBSS
4" ASBESTOS (EXISTING) CEMENT	WBSS	WBSS	DSS, WBSS	DSS, WBSS
4" PVC (AWWA C900)	DSS, WBSS	DSS, WBSS	DSS, WBSS	DSS, WBSS
6" AND 8" CAST IRON OR DUCTILE IRON	DSS, WBSS	DSS, WBSS	DSS, WBSS	DSS, WBSS
6" AND 8" ASBESTOS (EXISTING) CEMENT	DSS, WBSS	DSS, WBSS	DSS, WBSS	DSS, WBSS
6" AND 8" CAST IRON OR DUCTILE IRON	DSS, WBSS	DSS, WBSS	DSS, WBSS	DSS, WBSS
6" AND 8" PVC (AWWA C900)	DSS, WBSS	DSS, WBSS	DSS, WBSS	DSS, WBSS
12" CAST IRON OR DUCTILE IRON	DSS, WBSS	DSS, WBSS	DSS, WBSS	DSS, WBSS
12" ASBESTOS (EXISTING) CEMENT	DSS, WBSS	DSS, WBSS	DSS, WBSS	DSS, WBSS
12" PVC (AWWA C900)	DSS, WBSS	DSS, WBSS	DSS, WBSS	DSS, WBSS
16" AND UP CAST IRON OR DUCTILE IRON	DWBSS	DWBSS	DWBSS	DWBSS
16" AND UP ASBESTOS (EXISTING) CEMENT	DWBSS	DWBSS	DWBSS	DWBSS
16" AND UP PVC (AWWA C900)	DWBSS	DWBSS	DWBSS	DWBSS

DSS - DUAL STRAP SADDLES
WBSS - WIDE BAND STRAP SADDLES
DWBSS - DUAL WIDE BAND STRAP SADDLES

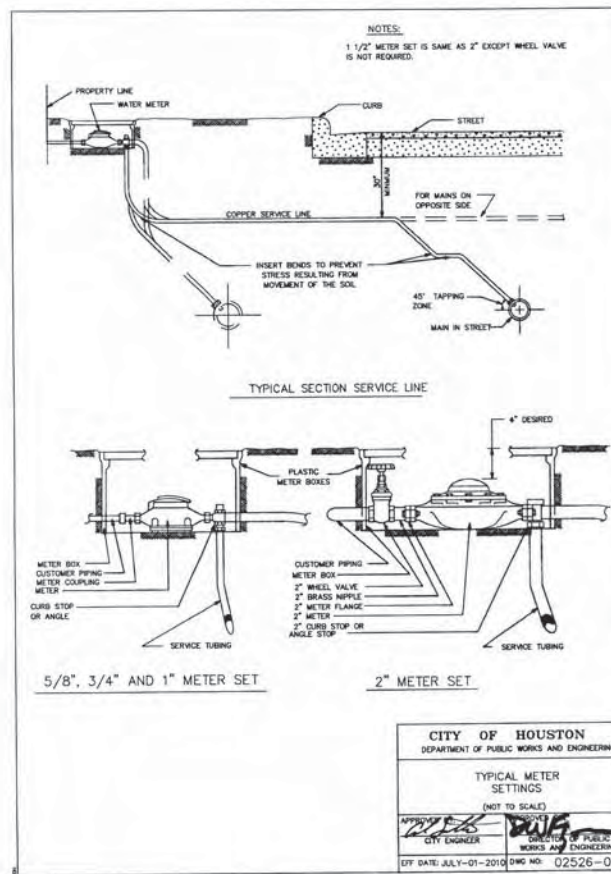
45°

SERVICE TAPS TO BE MADE IN THIS ZONE EXCEPT FOR PVC FASTTAP

WIDE BAND SINGLE SADDLE OR DUAL SADDLES

BLOW-OFF & CHLORINATION TAPS ARE MADE IN VERTICAL POSITION

CITY OF HOUSTON DEPARTMENT OF PUBLIC WORKS AND ENGINEERING	
SERVICE TAPS (NOT TO SCALE)	
<p>CITY ENGINEER</p>	<p>DIRECTOR OF PUBLIC WORKS AND ENGINEERING</p>
EFF DATE: JUL-01-2010	DWG NO: 02512-02



SERVICE TAPS
N.T.S.

4

TYPICAL METER SETTINGS
N.T.S.

5

SDPS
Houston Storm Drainage
Program Support

WILLIAM K. PAICE
58472

PGAL

TYPE REG.
NO. P-2542
3131 BROADWAY, SUITE 200
HOUSTON, TEXAS 77042
PHONE (713) 622-1444
FAX (713) 969-9333

SUPERVISED BY: LANDTECH
P-3076

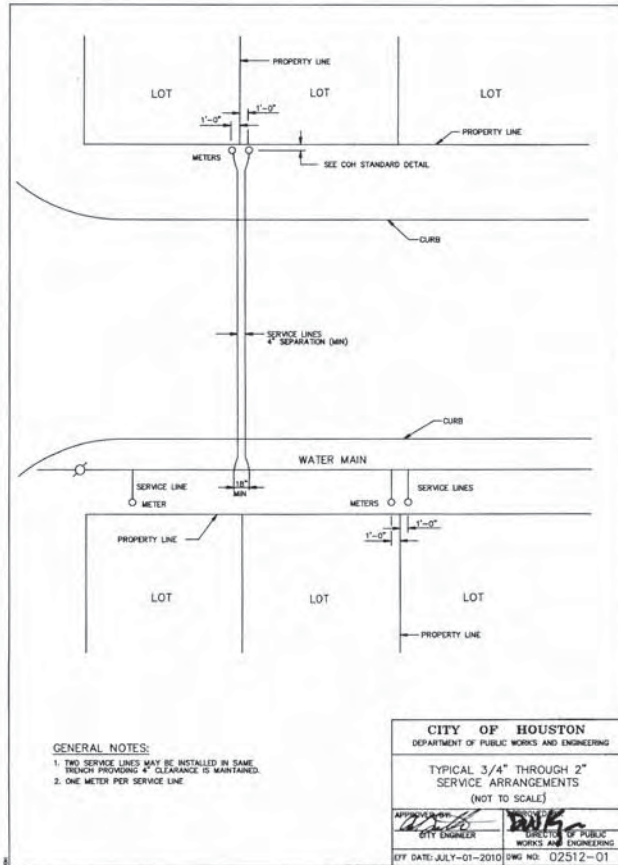
CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

WATER LINE DETAILS
SHEET 5 OF 6

WBS NUMBER	55630
M-000285-0001-4	
DRAWING SCALE	
NTS	
CITY OF HOUSTON PM	
JEFFREY T. HALL, P.E.	
SHEET NO. 376 OF 385	

DATE: 9/21/05 7:24:09 AM
PROJECT: 045-000-000-DRAINAGE/STORM/UTL/UTR/6-01



GENERAL NOTES:
 1. TWO SERVICE LINES MAY BE INSTALLED IN SAME TRENCH PROVIDING 4" CLEARANCE IS MAINTAINED.
 2. ONE METER PER SERVICE LINE

CITY OF HOUSTON DEPARTMENT OF PUBLIC WORKS AND ENGINEERING	
TYPICAL 3/4" THROUGH 2" SERVICE ARRANGEMENTS (NOT TO SCALE)	
 CITY ENGINEER	 DIRECTOR OF PUBLIC WORKS AND ENGINEERING
(BY DATE: JULY-01-2010) DWG NO: 02512-01	

TYPICAL 3/4" THROUGH 2"
SERVICE ARRANGEMENTS
N.T.S.

3

 SDPS Houston Storm Drainage Program Support	
 PGAL 3131 BRANNAPARK, SUITE 200 Houston, Texas 77042 Phone (713) 822-1444 Fax (713) 958-9333	 WILLIAM W. FAKE Mayor 2007-2011
SURVEYED BY: LANDTECH P-25746	
CITY OF HOUSTON DEPARTMENT OF PUBLIC WORKS AND ENGINEERING GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING WATER LINE DETAILS SHEET 6 OF 6	
WBS NUMBER M-000285-0001-4 DRAWING SCALE NTS CITY OF HOUSTON PM JEFFREY T. HALL, P.E. SHEET NO. 377 OF 385	55630

Table 7.3
PROTECTION REQUIREMENTS AT
WATER LINE (WL) - SANITARY SEWER (SS) CROSSINGS

	PROPOSED WATER LINE				PROPOSED SANITARY SEWER			
	OVER		UNDER		OVER		UNDER	
	EXISTING SS	PROP SS	EXISTING SS	PROP SS	EXISTING WL	PROP WL	EXISTING WL	PROP WL
Minimum 2 feet vertical clearance	√ ¹	√ ¹	√	√	Not Allowed	√	√ ¹	√ ¹
Place 1 full section (min 18 ft) of WL centered at SS Crossing. Provide restrained joints on WL, spaced at least 9 ft horizontally from centerline of SS	√	√	√	√		√		√
Place 1 full section (min 18 ft) of SS centered at WL Crossing. Provide restrained joints on SS, spaced at least 9 ft horizontally from centerline of WL		√					√	√
Replace 1 full section of existing SS with pressure-rated DIP or pressure-rated PVC pipe with adapters and restrained joints centered at WL crossing	√ ^{2,3}		√ ³					
Provide DIP for small diameter WL (less than 24 inches), PVC pipe is only allowed if encased as per TAC § 290.44, and use restrained joints for both DIP and PVC pipe			√	√		√		
Embed SS with CSS for the total length of 1 pipe segment plus 1 foot beyond the joints on each end	√ ^{2,3}	√ ⁴	√ ³	√ ⁴		√ ⁴	√ ⁴	√ ⁴
Place 1 full section (min 18 ft) of min 150 psi SS centered at WL crossing. Provide restrained joints on SS, spaced at least 9 ft horizontally from centerline of WL or encase in a joint of 150 psi pressure pipe (min 18 ft) two nominal sizes larger with spacers at 5 ft interval.				√		√		

1. Minimum clearance is 2 feet for non-pressure rated SS and 1 foot for pressure rated SS
2. Required if existing SS is disturbed and/or there is evidence of leakage
3. Not required for augered WL unless there is evidence of leakage; completely fill augered hole with bentonite/clay mixture
4. Not required for augered SS; completely fill augered hole with bentonite/clay mixture

Note:

- a. Both water lines and wastewater main or lateral must pass a pressure and leakage test as specified in AWWA C600 standards
- b. Sanitary sewers (SS) is applicable to both gravity sanitary sewers and force mains.

TEXAS ADMINISTRATIVE CODE (TAC)


TITLE 30	ENVIRONMENTAL QUALITY
PART 1	TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ)
CHAPTER 290	PUBLIC DRINKING WATER
SUBCHAPTER D	RULES AND REGULATIONS FOR PUBLIC WATER
RULE 290.44	WATER DISTRIBUTION
SECTION (e)	Location of Waterlines
PARAGRAPH (B)	New waterline installation - crossing lines

CLAUSE (11)(II) (WASTEWATER PIPE ENCASEMENT OPTION)

All sections of wastewater main or lateral within nine feet horizontally of the waterline shall be encased in an 18-foot (or longer) section of pipe. Flexible encasing pipe shall have a minimum pipe stiffness of 115 psi at 5.0% deflection. The encasing pipe shall be centered on the waterline and shall be at least two nominal pipe diameters larger than the wastewater main or lateral. The space around the carrier pipe shall be supported at five-foot (or less) intervals with spacers or be filled to the springline with washed sand. Each end of the casing shall be sealed with watertight non-shrink cement grout or a manufactured watertight seal. An absolute minimum separation distance of six inches between the encasement pipe and the waterline shall be provided. The wastewater line shall be located below the waterline.

CLAUSE (v) (CEMENT STABILIZED SAND BEDDING)

Where cement stabilized sand bedding is required, the cement stabilized sand shall have a minimum of 10% cement per cubic yard of cement stabilized sand mixture, based on loose dry weight volume (at least 2.5 bags of cement per cubic yard of mixture). The cement stabilized sand bedding shall be minimum of six inches above and four inches below the wastewater main or lateral. The use of brown coloring in cement stabilized sand for wastewater main or lateral bedding is recommended for the identification of pressure rated wastewater mains during future construction.



PGAL
3131 BRIDGEMAN, SUITE 200
HOUSTON, TEXAS 77042
PHONE (713) 622-1444
FAX (713) 968-8333

WILLIAM H. PACE
58472

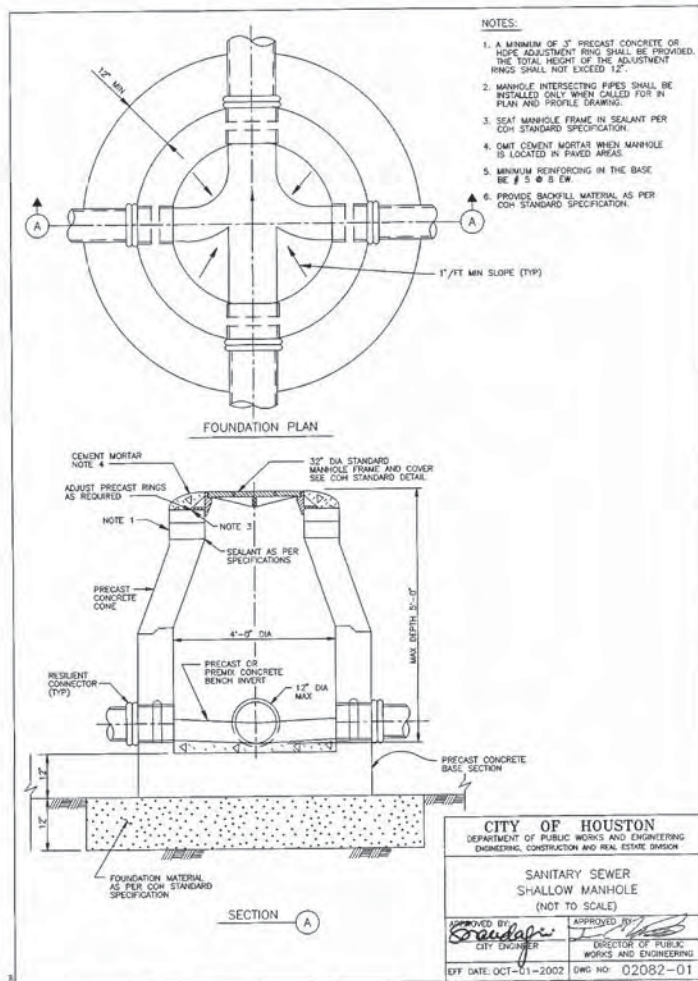
SURVEYED BY: LANDTECH
P-3078

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

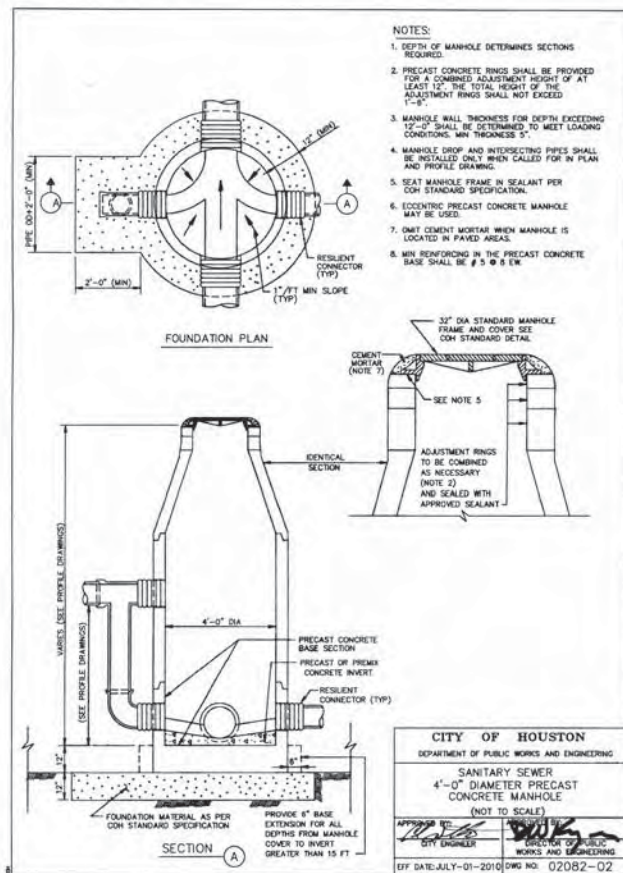
WATER LINE PROTECTION REQUIREMENTS SHEET 1 OF 1

WBS NUMBER	M-000285-0001-4
DRAWING SCALE	NTS
CITY OF HOUSTON PW	JEFFREY T. HALL, P.E.
SHEET NO. 378 OF 385	55630



SANITARY SEWER SHALLOW MANHOLE
N.T.S.

1

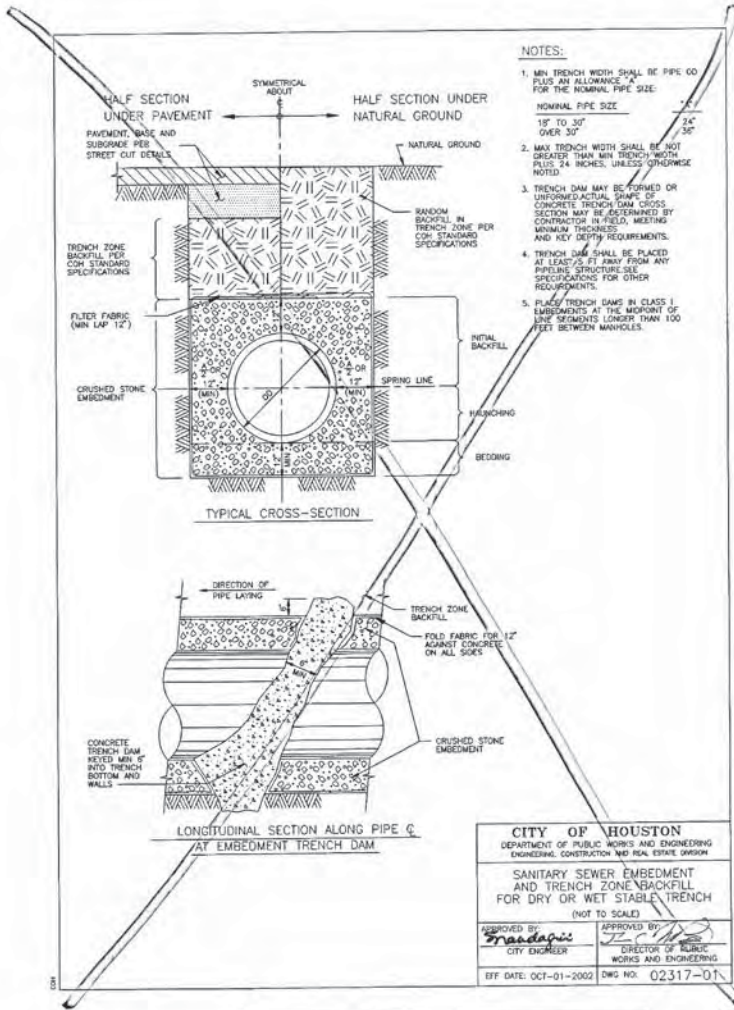


SANITARY SEWER 4'-0" DIAMETER PRECAST CONCRETE MANHOLE
N.T.S.

2

DATE: 9/20/2005 7:34:48 AM 14002082AS-02082002.DWG/SMANHOLE_DET1_SUN.dwg

<p>CITY OF HOUSTON DEPARTMENT OF PUBLIC WORKS AND ENGINEERING</p> <p>GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING</p> <p>SANITARY SEWER DETAILS SHEET 1 OF 8</p>	
<p>WBS NUMBER M-000285-0001-4</p> <p>DRAWING SCALE NTS</p> <p>CITY OF HOUSTON PM JEFFREY T. HALL, P.E. SHEET NO. 379 OF 385</p>	<p>5630</p>



CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
 ENGINEERING, CONSTRUCTION AND REAL ESTATE DIVISION

SANITARY SEWER EMBEDMENT AND TRENCH ZONE BACKFILL FOR DRY OR WET STABLE TRENCH
 (NOT TO SCALE)

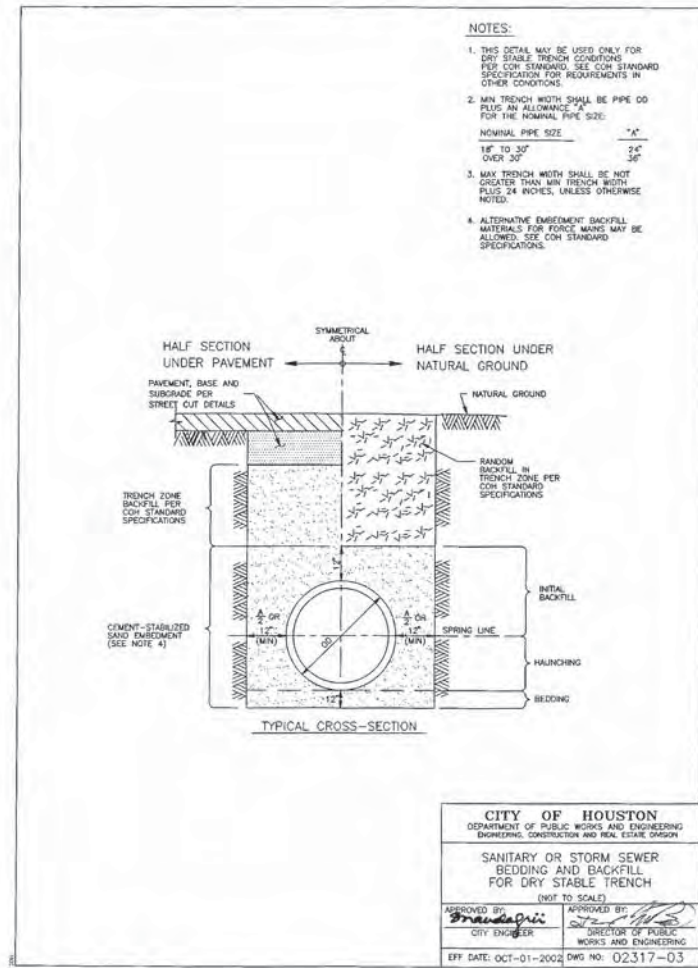
APPROVED BY: *[Signature]*
 CITY ENGINEER

APPROVED BY: *[Signature]*
 DIRECTOR OF PUBLIC WORKS AND ENGINEERING

EFF DATE: OCT-01-2002 DWG NO: 02317-01

NOTE:
 CRUSHED STONE IS NOT ALLOWED FOR SANITARY SEWER EMBEDMENT ON THIS PROJECT.

SANITARY SEWER EMBEDMENT AND TRENCH ZONE BACKFILL FOR DRY OR WET STABLE TRENCH ①
 N.T.S.



CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
 ENGINEERING, CONSTRUCTION AND REAL ESTATE DIVISION

SANITARY OR STORM SEWER BEDDING AND BACKFILL FOR DRY STABLE TRENCH
 (NOT TO SCALE)

APPROVED BY: *[Signature]*
 CITY ENGINEER

APPROVED BY: *[Signature]*
 DIRECTOR OF PUBLIC WORKS AND ENGINEERING

EFF DATE: OCT-01-2002 DWG NO: 02317-03

SANITARY OR STORM SEWER BEDDING AND BACKFILL FOR DRY STABLE TRENCH ②
 N.T.S.

SDPS
 Houston Storm Drainage Program Support

PGAL
 3121 BRANNAN, SUITE 200
 HOUSTON, TEXAS 77002
 PHONE (713) 622-1444
 FAX (713) 960-8333

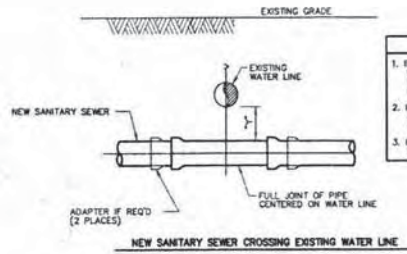
CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

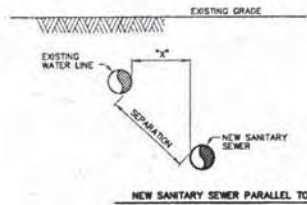
SANITARY SEWER DETAILS SHEET 3 OF 8

WBS NUMBER: M-000285-0001-4
 DRAWING SCALE: NTS
 CITY OF HOUSTON PM: JEFFREY T. HALL, P.E.
 SHEET NO. 381 OF 385

DATE: 9/16/02 1:54 PM
 AUTOCAD: C:\DWG\0001\DWG\0001.DWG



- INSTALLATION REQUIREMENTS**
1. IF "Y" IS GREATER THAN 1' AND "X" IS LESS THAN 2', USE MINIMUM 18 FT JOINT OF PRESSURE-RATED PIPE PER CDR STANDARD DRAWING.
 2. IF "Y" IS GREATER THAN 2' AND "X" IS LESS THAN 6', USE GRAVITY SEWER PIPE IN CEMENT-STABILIZED SAND EMBEDMENT.
 3. IF "Y" IS GREATER THAN 6', USE STANDARD EMBEDMENT AND NORMAL JOINT SPACING.



- INSTALLATION REQUIREMENTS**
1. IF SEPARATION IS LESS THAN 6', USE PRESSURE-RATED PIPE MH TO MH. "X" MUST BE AT LEAST 4 FT. VERTICAL SEPARATION MUST BE AT LEAST 2 FT.
 2. IF SEPARATION IS 6' OR GREATER, USE STANDARD PIPE AND EMBEDMENT.

NEW SANITARY SEWER CROSSING EXISTING WATER LINE

NEW SANITARY SEWER PARALLEL TO EXISTING WATER LINE

INSTALLING SANITARY SEWERS CROSSING OR PARALLEL TO WATER LINES

NOTES:

1. SANITARY SEWER MUST BE BELOW WATER LINE WHEREVER POSSIBLE. WHEN WATERLINE IS BELOW THE SANITARY SEWER PROVIDE MINIMUM 2 FT SEPARATION. AND INSTALL PIPE IN ACCORDANCE TO CHAPTER 7 TABLE 7.3 OF CDR DESIGN MANUAL.
2. WHEN PRESSURE-RATED PIPE IS REQUIRED, PROVIDE PIPE WITH MINIMUM 150 psi PRESSURE RATING.
3. ADAPTERS MUST BE FACTORY MOLDED OR FABRICATED, WITH RING STIFFNESS AT LEAST EQUAL TO THE ADJOINING SANITARY SEWER PIPE. AND USING RESILIENT GASKET OR SEAL MATERIAL. FLEXIBLE RUBBER "BOOT" TYPE ADAPTERS WILL NOT BE ACCEPTED.
4. INSTALL FORCE MAINS SAME AS FOR GRAVITY SEWER, USING SPECIFIED PRESSURE PIPE.
5. "Y" MUST ALWAYS BE GREATER THAN OR EQUAL TO 1 FT FOR PRESSURE RATED SS AND 2 FT FOR NON-PRESSURE RATED SS.
6. "X" MUST BE GREATER THAN OR EQUAL TO 4 FT.
7. ALTERNATIVES MAY BE SHOWN ON THE DRAWINGS OR DESCRIBED IN THE SPECIFICATIONS.
8. SEPARATION REQUIREMENTS SHOWN HERE DO NOT APPLY TO SERVICE CONNECTIONS - REFER TO PLUMBING CODE FOR APPLICABLE REQUIREMENTS.

DATE: 9/20/2016 TIME: 7:46:06 AM
 P:\020285\0001\SDPS\DWG\SDPS\DWG\JUL_15_16.dwg

SANITARY SEWER
 INSTALLING SANITARY SEWERS
 CROSSING OR PARALLEL TO WATER LINES
 N.T.S. ①

CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

**SANITARY SEWER
 INSTALLING SANITARY SEWERS
 CROSSING OR PARALLEL TO WATER LINES
 (NOT TO SCALE)**

APPROVED: [Signature] CITY ENGINEER
 DIRECTOR OF PUBLIC WORKS AND ENGINEERING

EFF DATE: JUL-01-2010 DWG NO: 02531-05

SDPS
 Houston Storm Drainage
 Program Support

PGAL
 SDPE 9552
 NO. 9-2762
 3133 BRADPARK, SUITE 200
 HOUSTON, TEXAS 77042
 PHONE (713) 822-1444
 FAX (713) 968-9333

CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

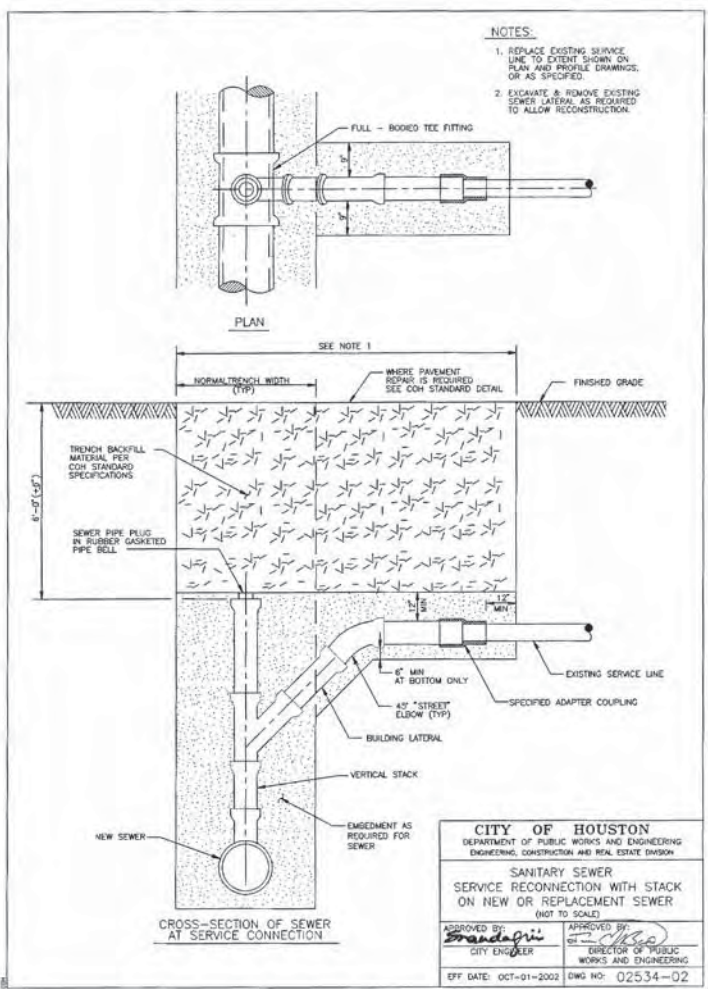
GARDEN OAKS AND
 SHEPHERD PARK (CENTRAL)
 DRAINAGE AND PAVING

SANITARY SEWER DETAILS
 SHEET 5 OF 8

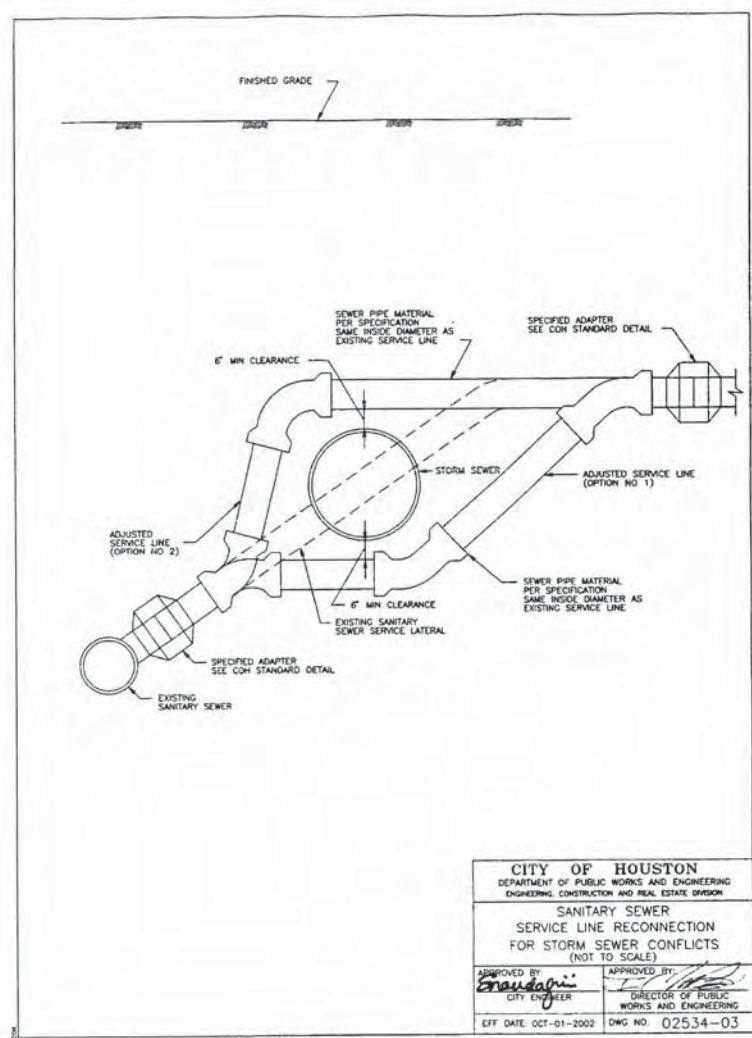
SUPPLIED BY: LANDTECH
 P. NO. 11-8576

WBS NUMBER
 M-000285-0001-4
 DRAWING SCALE
 NTS
 CITY OF HOUSTON PW
 JEFFREY T. HALL, P.E.
 SHEET NO. 383 OF 385

55630



SANITARY SEWER SERVICE RECONNECTION WITH STACK ON NEW OR REPLACEMENT SEWER ①
 N.T.S.



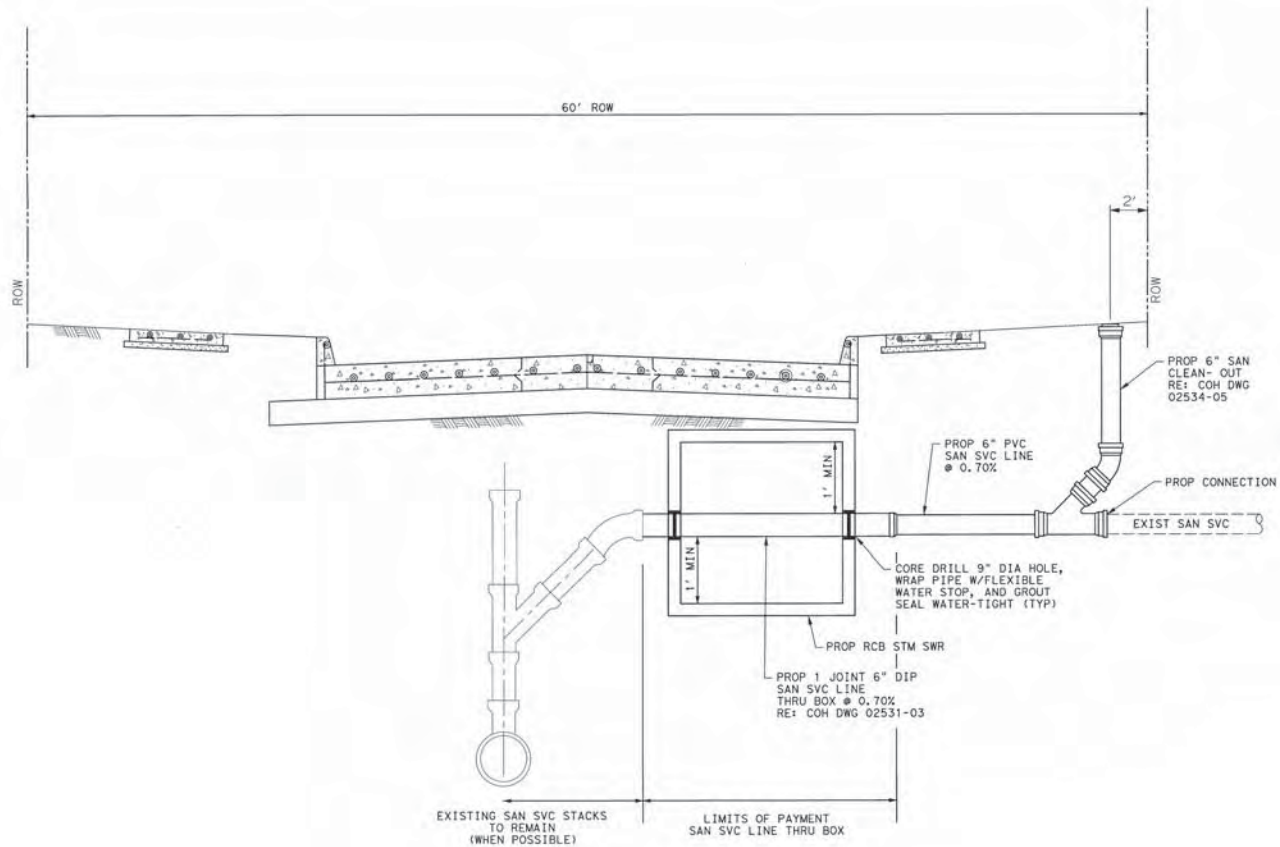
SANITARY SEWER SERVICE LINE RECONNECTION FOR STORM SEWER CONFLICTS ②
 N.T.S.



CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING
 SANITARY SEWER DETAILS
 SHEET 6 OF 8

WBS NUMBER	M-000285-0001-4
DRAWING SCALE	NTS
CITY OF HOUSTON PM	JEFFREY T. HALL, P.E.
SHEET NO.	384 OF 385



EXISTING SAN SVC STACKS TO REMAIN (WHEN POSSIBLE)

LIMITS OF PAYMENT SAN SVC LINE THRU BOX

SANITARY SEWER SERVICE CONNECTION THRU RCB STORM SEWER

N.T.S.

1



SUBMITTED BY: LANDTECH
PR NO. P-5516

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

SANITARY SEWER DETAILS
SHEET 8 OF 8

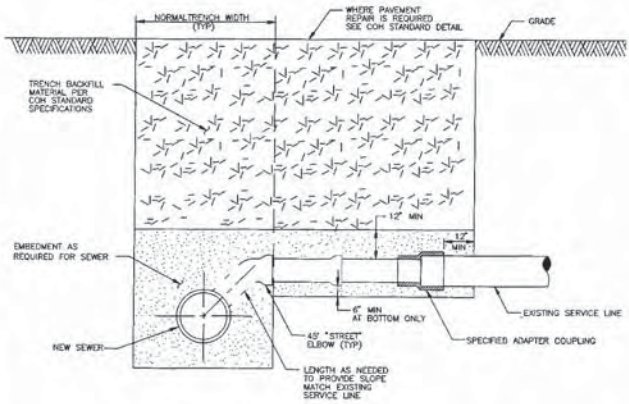
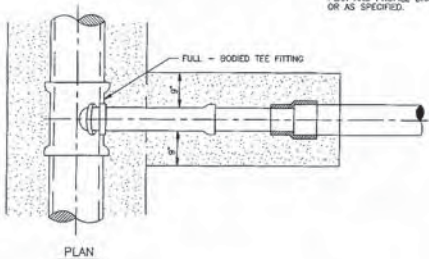
WBS NUMBER	M-000285-0001-4
DRAWING SCALE	N.T.S.
CITY OF HOUSTON PM	JEFFREY T. HALL, P.E.
SHEET NO.	385 OF 385



DATE: 07/08/08 09:00 AM
P:\000005\04\0000_DRAIN\04\0001\001_DET_SAN_8.dwg

NOTE:

1. REPLACE EXISTING SERVICE LINE TO EXTENT SHOWN ON PLAN AND PROFILE DRAWINGS, OR AS SPECIFIED.



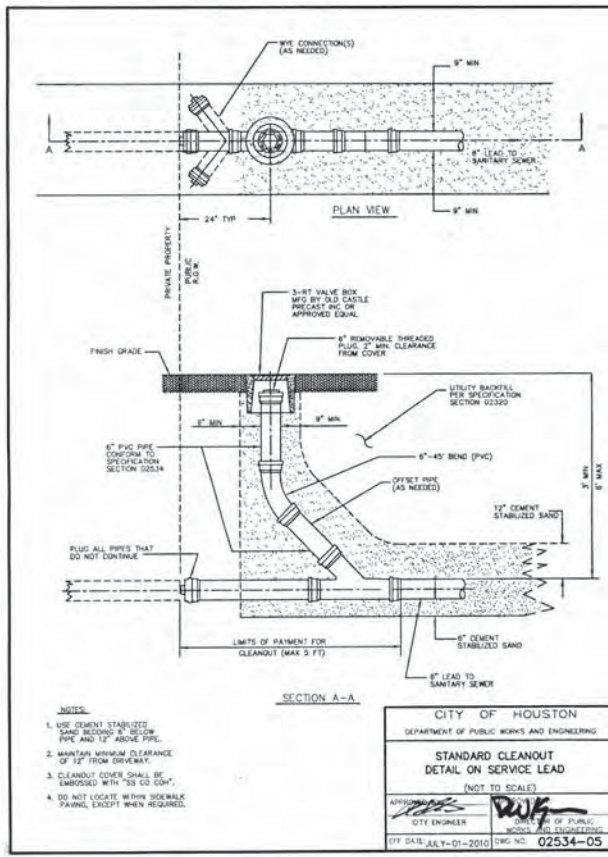
CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
 ENGINEERING, CONSTRUCTION AND REAL ESTATE DIVISION

SANITARY SEWER SERVICE RECONNECTION ON NEW OR REPLACEMENT SEWER (NOT TO SCALE)

APPROVED BY: *[Signature]* CITY ENGINEER
 APPROVED BY: *[Signature]* DIRECTOR OF PUBLIC WORKS AND ENGINEERING

EFF. DATE: OCT-01-2002 DWG NO. 02534-04

SANITARY SEWER SERVICE LINE RECONNECTION FOR STORM SEWER CONFLICTS
 N.T.S. ①



- NOTES:**
1. USE CEMENT STABILIZED SAND BEHIND 8" BELOW PIPE AND 12" ABOVE PIPE.
 2. MAINTAIN MINIMUM CLEARANCE OF 12" FROM DRIVEWAY.
 3. CLEANOUT COVER SHALL BE EMBOSSED WITH "S S CO CO".
 4. DO NOT LOCATE WITHIN SIDEWALK PAVING EXCEPT WHEN REQUIRED.

CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

STANDARD CLEANOUT DETAIL ON SERVICE LEAD (NOT TO SCALE)

APPROVED BY: *[Signature]* CITY ENGINEER
 APPROVED BY: *[Signature]* DIRECTOR OF PUBLIC WORKS AND ENGINEERING

CITY DATE: JUL 7-01-2010 DWG NO. 02534-05

STANDARD CLEANOUT DETAIL ON SERVICE LEAD
 N.T.S. ②

DWG NO. 02534-05 (REV. 07/01/10) DATE: 07/01/10

SDPS
 Houston Storm Drainage Program Support

PGAL
 3131 BRANNAN, SUITE 200
 HOUSTON, TEXAS 77042
 PHONE (713) 622-1844
 FAX (713) 968-9333

CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

SANITARY SEWER DETAILS SHEET 7 OF 8

WBS NUMBER: M-000285-0001-4
 DRAWING SCALE: NTS
 CITY OF HOUSTON PM: JEFFREY T. HALL, P.E.
 SHEET NO. 385A OF 385

55630