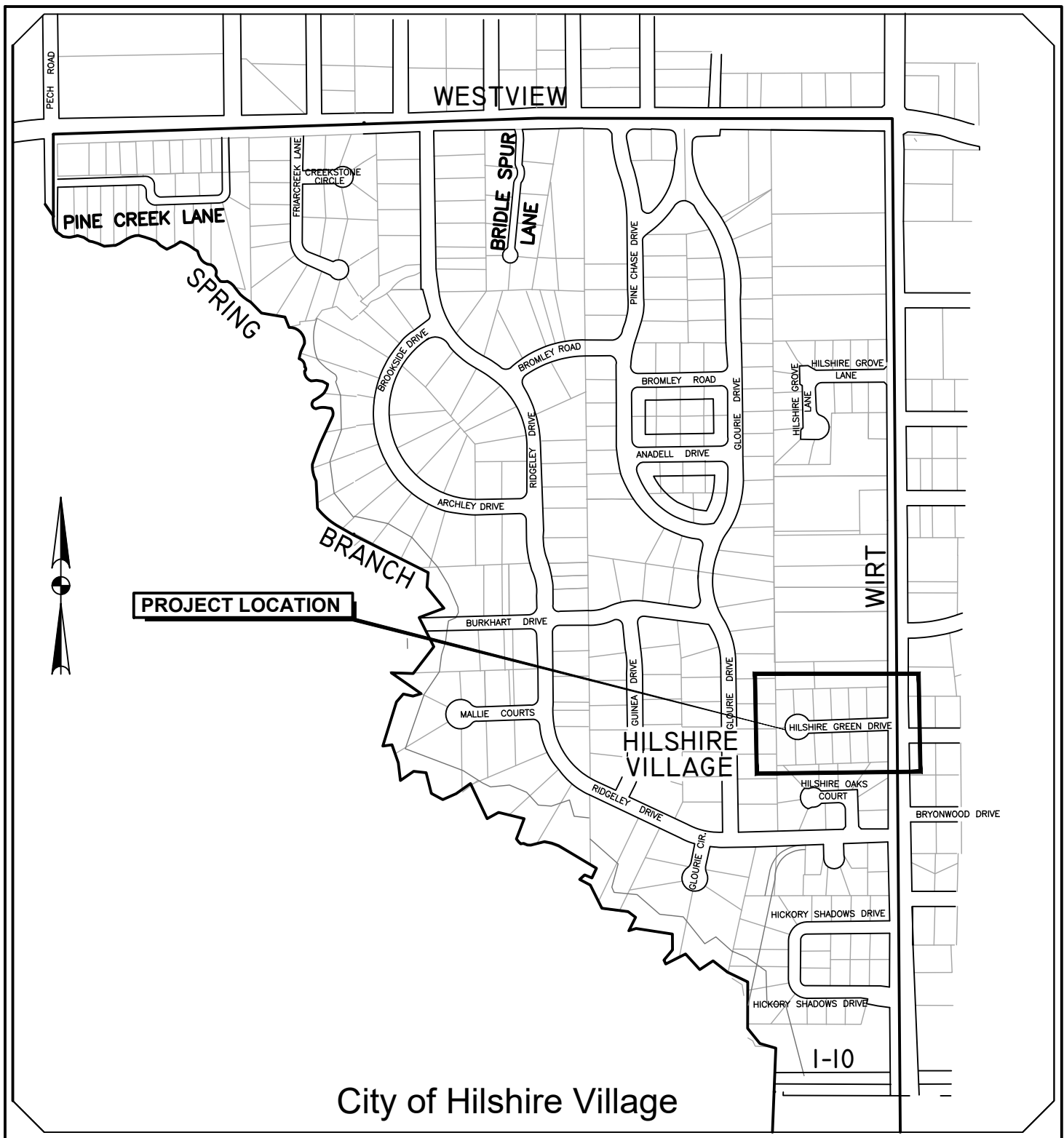


# City of Hilshire Village, Texas

## Hilshire Green Drive Paving, Drainage & Utility Improvements

October, 2024



City of Hilshire Village

VICINITY MAP

NOT TO SCALE  
HARRIS COUNTY KEY MAP 491B



### MAYOR

Robert (Bob) Buesinger

### COUNCIL

Mike Gordy

Andy Carey

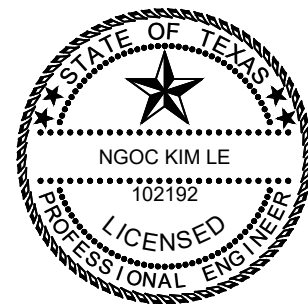
Kristi Cooper

Justin Crawford

Mark Huber

### CITY SECRETARY

Cassie Stephens



SUBMITTED BY:

*Ngoc Kim Le*

DATE:

10-28-2024

HDR ENGINEERING, INC.

APPROVED BY:

*Robert B. Buesinger*

DATE:

10/28/2024

ROBERT (BOB) BUESINGER  
MAYOR, CITY OF HILSHIRE VILLAGE



HDR Engineering Inc. Texas Reg. No. 754  
4828 Loop Central Drive, Suite 700 • Houston, Texas 77081  
(713) 622-9264 • Fax (713) 622-9265 • www.hdrinc.com

HDR PROJECT NO. 10408611

#### SHEET SHEET TITLE No.

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GENERAL NOTES:

1.

CONTRACTOR SHALL NOTIFY THE CITY OF HILSHIRE VILLAGE AT (713) 973-1779 AND THE ENGINEER AT (713) 622-9264 48 HOURS PRIOR TO START OF CONSTRUCTION.
2.

CONTRACTOR SHALL CONTACT ALL PERTINENT UTILITY COMPANIES 48 HOURS (MINIMUM) PRIOR TO EXCAVATION IN AREA. THE HOUSTON AREA UTILITY COORDINATING COMMITTEE MAY BE CONTACTED FOR CERTAIN UTILITIES AT (713) 223-4567 OR TOLL FREE 1-800-669-8344 48 HOURS BEFORE BEGINNING WORK.
3.

CONTRACTOR SHALL COORDINATE ANY UTILITY CONSTRUCTION THAT MAY DISRUPT SERVICE WITH THE CITY OF HILSHIRE VILLAGE (CASSIE STEPHENS, CITY SECRETARY, 713-973-1779.) AND THE CITY'S OPERATOR (ST SERVICES @ 281-578-4200). NOTIFY CITY 24 HOURS IN ADVANCE.
4.

PROPERTY OWNERS SHALL BE NOTIFIED IN WRITING BY THE CONTRACTOR, BETWEEN 48 HOURS AND 7 DAYS IN ADVANCE OF DISTURBANCE OF DRIVEWAYS. PROPERTY OWNER SHALL BE PROVIDED THE MINIMUM FOLLOWING INFORMATION: WORK TO BE PERFORMED, STARTING AND ENDING DATES, THE NAME AND NUMBER OF CONTRACTOR'S REPRESENTATIVE, AND NAME OF HILSHIRE VILLAGE OFFICIAL TO BE CONTACTED FOR QUESTIONS. WRITTEN NOTICES SHALL BE APPROVED BY HILSHIRE VILLAGE PRIOR TO DISTRIBUTION.
5.

TEXAS LAW ARTICLE 1436C, PROHIBITS ALL ACTIVITIES IN WHICH PERSONS OR EQUIPMENT MAY COME WITHIN SIX FEET OF ENERGIZED OVERHEAD POWER LINES, AND FEDERAL REGULATIONS, TITLE 29, PART 1910.180(I) AND PART 1926.550(A)(15) REQUIRE A MINIMUM CLEARANCE OF TEN FEET FROM THESE FACILITIES. THE ABOVE LAWS CARRY BOTH CRIMINAL AND CIVIL LIABILITIES, WITH CONTRACTORS AND OWNERS BEING LEGALLY RESPONSIBLE FOR THE SAFETY OF WORKERS UNDER THESE LAWS. IF YOU OR YOUR COMPANY MUST WORK NEAR OVERHEAD POWER LINES, CALL (713) 228-7400 FOR THE LINES TO BE DE-ENERGIZED AND/OR MOVED AT YOUR EXPENSE.
6.

IN THE EVENT A GAS LINE IS EXPOSED DUE TO EXCAVATION AND IS IN NEED OF RELOCATION, THE APPROPRIATE GAS COMPANY SHALL BE CONTACTED BY THE CONTRACTOR TO HAVE STATUS OF THE LINE VERIFIED. CONTRACTOR IS RESPONSIBLE FOR HAVING THE GAS COMPANY RELOCATE THE GAS LINES WITHIN THE RIGHT OF WAY. SEE NOTE FOR CENTERPOINT ENERGY THIS PAGE.
7.

THE PREPARATION OF THESE PLANS REFLECT INFORMATION PROVIDED BY OTHERS ON THE APPROXIMATE LOCATION AND EXISTENCE OF EXISTING UTILITIES AND ADJACENT PHYSICAL FEATURES; HOWEVER, THEY DO NOT IMPLY OR AFFIRM THAT ALL UTILITIES OR PHYSICAL FEATURES ARE SHOWN. GENERALLY, UTILITY SERVICE CONNECTIONS ARE NOT INDICATED ON THESE PLANS. CONTRACTOR IS RESPONSIBLE FOR NOTIFICATION OF THE OWNER IMMEDIATELY UPON ENCOUNTERING UNFORESEEN CONFLICTS.
8.

IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE DEPTH, LOCATION AND EXISTENCE OF ALL EXISTING UTILITIES WHICH MAY CONFLICT WITH THE PROPOSED CONSTRUCTION, PRIOR TO CONSTRUCTION. NOTIFY ENGINEER OF ANY DISCREPANCIES.
9.

RIGHTS OF WAY INDICATED ARE APPROXIMATE. CONTRACTOR SHALL VERIFY EXACT LIMITS OF RIGHT OF WAY PRIOR TO CONSTRUCTION.
10.

THE CONTRACTOR SHALL MAINTAIN ACCESS TO RESIDENTIAL AND COMMERCIAL PROPERTIES ADJACENT TO WORK AREAS AT ALL TIMES.
11.

NO EXCAVATIONS SHALL BE LEFT OPEN OVERNIGHT. ALL EXCAVATIONS WHICH CANNOT BE BACKFILLED OVERNIGHT SHALL BE COVERED. USE STEEL PLATES WHEN IN PAVED AREAS; IN OTHER AREAS USE 3/4" PLYWOOD, WOOD PLANKING OR OTHER MATERIAL APPROVED BY THE CITY. THE EXCAVATION AREA MUST BE WELL PROTECTED WITH TRAFFIC BARRICADES EQUIPPED WITH FLASHING YELLOW LIGHTS, DURING ACTIVE CONSTRUCTION PERIODS. THE EXCAVATION AREAS MUST BE COMPLETELY CORDONED OFF WITH PLASTIC TAPE OR CONSTRUCTION FENCE WHEN CONSTRUCTION IS NOT ACTIVELY PROGRESSING.
12.

THE CONTRACTOR SHALL CONDUCT HIS OPERATIONS IN A MANNER SUCH THAT TRUCKS AND OTHER VEHICLES DO NOT CREATE A DIRT NUISANCE OR SAFETY HAZARD IN ANY STREETS, PUBLIC OR PRIVATE. CLEAN UP OF STREETS SHALL BE DONE DAILY.
13.

IT IS IMPERATIVE THAT THE CONSTRUCTION IN THE PROJECT AREA INCONVENIENCE THE RESIDENTS OF THE AREA AS LITTLE AS POSSIBLE. CLEAN-UP SHALL BE COMPLETED AND MAINTAINED WITHIN ONE BLOCK BEHIND ALL CONSTRUCTION OF UTILITIES AND PAVING. CLEAN-UP INCLUDES COMPACTION OF BACKFILL, CLOSURE OF BORE PITS, AND SURFACE RESTORATION. NEW CONSTRUCTION OPERATIONS TO BE SUSPENDED TEMPORARILY IF COMPLETE CLEAN-UP IS FURTHER THAN ONE BLOCK BEHIND CONSTRUCTION.
14.

ANY AREA OF GRASS WHICH IS DISTURBED OR DUG UP DURING THE CONSTRUCTION SHALL BE REPLACED WITH ST. AUGUSTINE SOD OR GRASS WHICH MATCHES THE GRASS REMOVED, AT NO ADDITIONAL COST TO THE CITY. WHEN CONSTRUCTION OCCURS IN CITY RIGHTS-OF-WAY AND EASEMENTS ON RESIDENTIAL YARD AREAS, CARE SHALL BE TAKEN TO MINIMIZE CONSTRUCTION DAMAGE TO YARD AREAS.
15.

CONTRACTOR SHALL ADEQUATELY PROTECT EXISTING STRUCTURES, SPRINKLER SYSTEMS, LANDSCAPING, UTILITIES, POWER POLES, TREES, SHRUBS AND OTHER PERMANENT OBJECTS. TREES SHALL NOT BE REMOVED OR DISTURBED UNLESS OTHERWISE NOTED IN THE TREE PROTECTION PLANS. WHERE TREE ROOTS MUST BE CUT, FOLLOW THE REPAIR METHODS DESCRIBED IN THE SPECIFICATIONS AND TREE PROTECTION PLANS. ALL COST FOR REPAIRS OR REPLACEMENT OF DAMAGE DUE TO CONTRACTOR'S PERFORMANCE WILL BE PAID BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE PROJECT.
16.

CONTRACTOR SHALL NOT USE RESIDENTS WATER.
17.

PROGRESS MEETINGS WILL BE HELD BETWEEN THE CONTRACTOR, THE CITY, AND THE ENGINEER ON A MONTHLY BASIS DURING CONSTRUCTION, AND MORE FREQUENTLY IF NEEDED.

18.

WHERE MANHOLES ARE DESIGNATED TO BE REHABILITATED ON A LINE SECTION DESIGNATED FOR FULL LENGTH REHABILITATION, THE FULL LENGTH REHABILITATION SHOULD BE PERFORMED PRIOR TO THE MANHOLE REHABILITATION.
19.

THE CONTRACTOR SHALL MAINTAIN SANITARY SEWER FLOW IN THE EXISTING SANITARY SEWER DURING THE ENTIRE DURATION OF THE PROPOSED SANITARY SEWER CONSTRUCTION OR REHABILITATION. ANY BYPASS PUMPING NECESSARY TO FACILITATE CONSTRUCTION AND TO MAINTAIN FLOW SHALL BE INCIDENTAL TO THE PROJECT.
20.

THE CONTRACTOR SHALL BE AWARE THAT THE PIPE SIZES, PIPE TYPES, AND LOCATIONS SHOWN ON THE PLANS SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO COMMENCING CONSTRUCTION AT NO COST TO THE PROJECT.
21.

THE CONTRACTOR IS MADE AWARE THAT LOCATIONS OF SOME SANITARY SEWER LINES DESIGNATED FOR REHABILITATION OR TELEVISION INSPECTION ARE WITHIN OR IN CLOSE PROXIMITY TO RESIDENTIAL AND COMMERCIAL BUSINESS LOTS. THE CONTRACTOR SHALL COORDINATE WITH THE PERTINENT ENTITY AND PROVIDE AT LEAST SEVEN (7) DAYS ADVANCE NOTICE PRIOR TO COMMENCING ANY WORK IN THE AREA. THE CONTRACTOR SHALL MAINTAIN ACCESS AT ALL TIMES. INTERRUPTION OF SERVICE, IF ANY, SHOULD BE MINIMAL AND SHALL BE SCHEDULED AT A MUTUALLY AGREEABLE TIME OR AFTER HOURS. THE CONTRACTOR SHALL MAINTAIN SANITARY SEWER SERVICE TO THE RESIDENTS THROUGHOUT THE REHABILITATION OPERATIONS.
22.

ALL PROPOSED STORM PIPE SHALL BE TONGUE AND GROOVE RCP WITH RAMNEK JOINTS.

UTILITY & PAVING NOTES:

1.

THE CONTRACTOR'S SURVEYOR SHALL BE REGISTERED IN THE STATE OF TEXAS AND SHALL VERIFY THE LOCATION OF THE RIGHT OF WAY AND BASELINE PRIOR TO CONSTRUCTION.
2.

RELOCATE ALL EXISTING PRIVATE UTILITIES AS NECESSARY FOR CONSTRUCTION. LOCATION AND ELEVATIONS OF EXISTING UTILITIES SHOWN ON DRAWINGS ARE APPROXIMATE AND SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. RELOCATION OF EXISTING UTILITIES SHALL BE AT THE CONTRACTOR'S EXPENSE.
3.

PROVIDE ONE FOOT (1') MINIMUM CLEARANCE BETWEEN GAS LINES AND OTHER UTILITIES (NEW OR EXISTING).
4.

CONTRACTOR SHALL COMPLY WITH OSHA REGULATIONS AND STATE OF TEXAS LAW CONCERNING EXCAVATION, TRENCHING AND SHORING.
5.

CONTRACTOR SHALL MAINTAIN ADEQUATE DRAINAGE AT ALL TIMES DURING CONSTRUCTION AND SHALL RESHAPE AND REGRADE STREET DITCH TO ORIGINAL OR BETTER CONDITION, IF DISTURBED DURING CONSTRUCTION, AT NO ADDITIONAL COST TO THE CITY.
6.

ALL EXCAVATION AREAS MUST BE COMPLETELY CORDONED OFF WITH A MINIMUM OF TWO STRANDS OF PLASTIC CONSTRUCTION TAPE, OR CONSTRUCTION FENCE ACCEPTABLE TO THE CITY. ADEQUATE BARRICADES WITH FLASHING YELLOW LIGHTS SHALL BE INSTALLED TO PROTECT PEDESTRIAN AND VEHICLE TRAFFIC.
7.

ALL PAVEMENTS OUTSIDE THE PROJECT AREA REMOVED OR DAMAGED DURING CONSTRUCTION SHALL BE REPLACED WITH EQUAL OR BETTER MATERIALS, TO THE SATISFACTION OF THE ENGINEER, AT NO ADDITIONAL COST TO THE CITY.
8.

UNIT PRICE ITEM FOR REMOVAL AND REPLACEMENT OF EXISTING DRIVEWAYS SHALL INCLUDE THE REPLACEMENT OF DRIVEWAYS USING EITHER PLAIN REINFORCED CONCRETE OR ASPHALT, BASED ON THE TYPE OF MATERIAL THE EXISTING DRIVEWAY IS MADE OF. REMOVE AND REPLACE EXISTING DRIVEWAYS IN ACCORDANCE WITH THE FOLLOWING SCHEDULE:

Existing Driveway Material	Proposed Driveway Material
Concrete	Concrete
Concrete with decorative paving materials	Concrete
Concrete with asphalt overlay	Concrete
Asphalt	Asphalt
Asphalt with decorative paving materials	Asphalt
Gravel/Other	Asphalt

9.

DECORATIVE DRIVEWAYS AND SIDEWALKS EXIST WITHIN THE PROJECT AREA LIMITS. CONTRACTOR SHALL COORDINATE AND GIVE THE OPPORTUNITY TO PROPERTY OWNERS TO PAY THE DIFFERENCE IN COST FOR THE REPLACEMENT/UPGRADE OF ANY DECORATIVE MATERIALS OR TREATMENTS USED ON THEIR DRIVEWAYS AND/OR SIDEWALKS. PAYMENT FOR THE UPGRADE IN MATERIALS SHALL BE MADE BY THE HOMEOWNER DIRECTLY TO THE CONTRACTOR, WITH THE CITY'S ONLY INVOLVEMENT BEING TO FACILITATE DISPUTE RESOLUTION.
10.

DRIVEWAY AND SIDEWALK REPLACEMENT SHALL MATCH THE WIDTH AND LOCATION OF THE EXISTING FACILITY.
11.

PARKING AREAS BUILT WITHIN STREET RIGHTS-OF-WAY SHALL BE REMOVED AS SHOWN ON THE PLANS AND IN ACCORDANCE WITH SECTION 02100 - RIGHT OF WAY PREPARATION. COST TO REMOVE THESE FACILITIES IS INCIDENTAL TO THE PROJECT, UNLESS OTHERWISE NOTED IN THE BID FORM. RECONSTRUCTION OF THESE PARKING AREAS IS NOT INCLUDED UNDER THIS CONTRACT.
12.

LARGE MASONRY MAILBOXES AND OTHER TYPES OF DECORATIVE MAILBOXES EXIST WITHIN THE PROJECT AREA LIMITS. CONTRACTOR SHALL TEMPORARILY REMOVE AND RELOCATE ANY MAILBOXES LOCATED WITHIN THE STREET RIGHT-OF-WAY OUT OF HARMS WAY. CONTRACTOR SHALL COORDINATE WITH PROPERTY OWNERS AND ENGINEER THE TEMPORARY AND PERMANENT RELOCATION OF THESE FACILITIES. COST FOR TEMPORARY AND PERMANENT RELOCATION OF MAILBOXES IS INCIDENTAL TO THE PROJECT, UNLESS OTHERWISE NOTED IN THE BID FORM.

13.

RESIDENT'S LANDSCAPING IMPROVEMENTS EXIST WITHIN THE PROJECT AREA LIMITS. CONTRACTOR SHALL COORDINATE WITH PROPERTY OWNERS AND CAREFULLY REMOVE EXISTING LANDSCAPE IMPROVEMENTS LOCATED WITHIN THE STREET RIGHT-OF-WAY AND DELIVER THE SALVAGED ITEMS AND MATERIALS TO THE CORRESPONDING PROPERTY OWNER. COST TO REMOVE AND SALVAGE EXISTING RESIDENT'S LANDSCAPING IMPROVEMENTS LOCATED IN THE RIGHT-OF-WAY IS INCIDENTAL TO THE PROJECT, UNLESS OTHERWISE NOTED IN THE BID FORM.
14.

RESIDENT'S SPRINKLER SYSTEMS MAY BE LOCATED WITHIN THE STREET RIGHT-OF-WAY. CONTRACTOR SHALL CUT AND CAP EXISTING SPRINKLER SYSTEMS AT THE RIGHT-OF-WAY LINE PRIOR TO CONSTRUCTION. COST TO CUT AND CAP EXISTING SPRINKLER SYSTEMS IS INCIDENTAL TO THE PROJECT, UNLESS OTHERWISE NOTED IN THE BID FORM. RESTORATION OF THE SPRINKLER SYSTEM IS NOT INCLUDED UNDER THIS CONTRACT.
15.

ALL WATER LINES SHALL HAVE 4' COVER ( 3' ABSOLUTE MINIMUM).

TRAFFIC CONTROL

1.

CONTRACTOR SHALL NOTIFY THE CITY OF HILSHIRE VILLAGE, AMBULANCE, POLICE, FIRE AND OTHER EMERGENCY SERVICE AGENCIES AT LEAST 48 HOURS PRIOR TO CLOSURE OF ANY STREET, INTERSECTION OR LANE OF TRAFFIC. CONTRACTOR SHALL MAKE NECESSARY PROVISIONS TO ALLOW ACCESS TO EMERGENCY VEHICLES AT ALL TIMES.
2.

CONTRACTOR SHALL MAINTAIN AT LEAST ONE LANE OPEN TO TRAFFIC AT ALL TIMES. FLAGGER AND/OR UNIFORMED OFF-DUTY POLICE OFFICER SHALL BE USED TO CONTROL TRAFFIC. UNIFORMED OFFICERS SHALL BE USED FOR TRAFFIC CONTROL ON ALL MAJOR THOROUGHFARES.
3.

DURING CONSTRUCTION PROCESS, CONTRACTOR SHALL ALLOW RESIDENT TRAFFIC ACCESS TO ADJACENT PROPERTIES WITH PROPER GUIDANCE, DIRECTION AND TRAFFIC CONTROL, BUT ONLY AT SUCH TIMES THAT DAMAGE WILL NOT OCCUR TO THE CONSTRUCTION OR THE VEHICLE.
4.

CONTRACTOR SHALL SET AND MAINTAIN BARRICADES, SIGNS AND OTHER TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH THE TEXAS MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION.
5.

THE CONTRACTOR SHALL CONDUCT HIS OPERATIONS IN A MANNER SUCH THAT TRUCKS AND OTHER VEHICLES DO NOT CREATE A DIRT NUISANCE OR SAFETY HAZARD IN ANY STREETS, PUBLIC OR PRIVATE. CLEAN UP OF STREETS SHALL BE DONE DAILY.
6.

ALL TEMPORARY AND PERMANENT TRAFFIC CONTROL DEVICES AND MARKINGS AND STRIPING REQUIRED FOR THIS PROJECT SHALL BE INCIDENTAL TO TRAFFIC CONTROL AND REGULATION (NO SEPARATE PAY)
7.

TEMPORARY ACCESS TO DRIVEWAYS, AS REQUIRED DURING ROADWAY CONSTRUCTION SHALL BE INCIDENTAL TO TRAFFIC CONTROL AND REGULATION. (NO SEPARATE PAY)

AT&T TEXAS/SWBT FACILITIES

1.

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.
2.

The contractor shall call 1-800-344-8377 (TEXAS 811) a minimum of 48 hours prior to construction to have underground lines field located.
3.

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.
4.

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.
5.

The presence or absence of AT&T Texas/SWBT underground conduit facilities of 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.
6.

Please contact the AT&T Texas Damage Prevention Manager Kevin Ray Jr. at (713) 614-1983 or e-mail him at kr7896@att.com, if cable locate requests are not completed for our AT&T Texas/SWBT facilities.

CENTERPOINT ENERGY GAS FACILITIES

CAUTION: UNDERGROUND GAS FACILITIES

The Contractor shall contact the Utility Coordinating Committee at 1-800-545-6005 or 811 a minimum of 48 hours prior to construction to have main and service lines field located.

- When CenterPoint Energy pipe line markings are not visible, call (713) 207-5463 or (713) 945-8037 (7:00 a.m. to 4:30 p.m.) for status of line location request before excavation begins.
- When excavating within eighteen inches (18") of the indicated location of CenterPoint Energy Facilities, all excavation must be accomplished using non-mechanized excavation procedures.
- When CenterPoint Energy facilities are exposed, sufficient support must be provided to the facilities to prevent excessive stress on the piping.
- For emergencies regarding gas lines call (713) 659-2111 or (713) 207-4200.

The Contractor is fully responsible for any damages caused by his failure to exactly locate and preserve these underground facilities.

CENTERPOINT ENERGY ELECTRIC FACILITIES

CAUTION: 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 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 law carries both criminal and civil liability. To arrange for lines to be turned off or removed call CenterPoint Energy at (713) 207-2222.

ACTIVITIES ON/OR ACROSS CENTERPOINT ENERGY FEE OR EASEMENT PROPERTY

No approval to use, cross or occupy CenterPoint fee or easement property is given. If you need to use CenterPoint property, please contact our Survey & Right of Way Division at (713) 207-6348 or (713) 207-5769.

WARNING: UNDERGROUND ELECTRICAL UTILITIES

The Contractor shall contact the utility coordinating committee at 1-800-545-6005 or 811 a Minimum of 48 hours prior to construction to have main and service lines field located.

- All information concerning type and location of underground utilities is not guaranteed to be accurate or all inclusive. The contractors are responsible making their own determinations as to type and location of underground utilities as may be necessary to avoid damage thereto. The contractor shall verify location of underground pipelines, conduits, and structures by contacting owners of underground utilities or by excavating in advance of construction.
- The contractor is responsible for determining the exact location of all utilities when and where they fall in the path of construction.
- The contractor is also responsible for contacting the utility coordinating committee at (713) 223-4567 and Texas one call at 1-800-245-4545, forty-eight (48) hours prior to any construction.
- The location of any CenterPoint energy utilities are shown in approximate way only. The contractor shall determine the exact location before commencing work. They agree to be fully responsible for any and all damages which might be occasioned by this failure to exactly locate and preserve these underground utilities.
- All proposed facilities shall maintain 12" clear from all existing utilities.

PRIVATE UTILITY LINES SHOWN

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

AT&T Texas/SWBT Utility Lines Shown

Date: \_\_\_\_\_  
Approved for AT&T Texas/SWBT Underground Conduit Facilities Only.  
Signature Valid for One Year.

Date: \_\_\_\_\_  
CenterPoint Energy/Electric Facilities  
(Approved Only for Crossing Underground Ductlines, Unless Otherwise Noted.)  
Valid at Time of Review Only.

Date: \_\_\_\_\_  
CenterPoint Energy/Gas Facilities  
(Gas Service Lines are not Shown)

Date: \_\_\_\_\_

Date: \_\_\_\_\_

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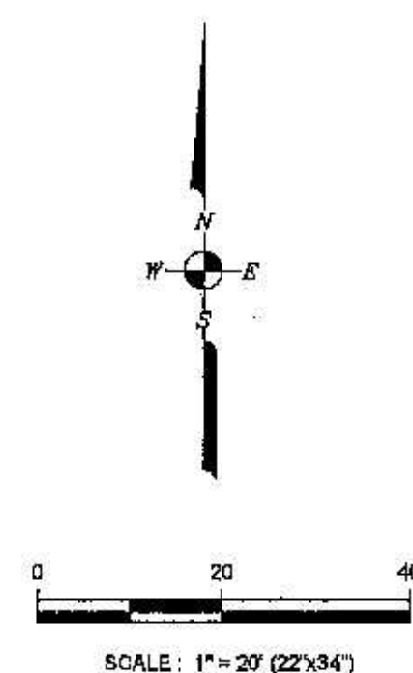
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SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
<b>EXISTING PLAN VIEW</b>	<b>DESCRIPTION</b>	<b>EXISTING PLAN VIEW</b>	<b>DESCRIPTION</b>
	IRON PIPE OR IRON ROD MONUMENTS		HOUSTON LIGHTING & POWER CO CONDUIT & MANHOLE
	CENTERLINE OF RIGHT-OF-WAY		POWER POLE W/OVERHEAD LINES
	SURVEY BASELINE		POWER POLE W/DOWN GUY
	EXISTING RIGHT-OF-WAY LINE		TRAFFIC LIGHT POLE
	PROPERTY LINE		MARKER
	DIMENSION LINE		BUSINESS SIGN
	CURB LINE		SIGN POST
	EDGE OF ASPHALT PAVEMENT		FENCE LINE (CHAIN LINK OR OTHER)
	SIDEWALK		FENCE LINE (BARBED WIRE)
	SHRUBS		
	TREE		
	BUILDING		
	SLAB		
	POST, WOOD OR METAL		
	INDEX CONTOUR		
	WATER LINE (20" & SMALLER)		
	WATER LINE (24" & LARGER)		
	WATER VALVE (GATE OR BUTTERFLY)		
	TAPPING SLEEVE AND VALVE		
	FIRE HYDRANT		
	WATER METER		
	GAS LINE		
	GAS METER		
	SANITARY SEWER LINE (24" & SMALLER)		
	SANITARY SEWER LINE (30" & LARGER)		
	SANITARY SEWER LINE, MANHOLE & CLEANOUT		
	STORM SEWER LINE (24" & SMALLER)		
	STORM SEWER LINE (30" & LARGER)		
	STORM SEWER LINE AND MANHOLE		
	STORM SEWER JUNCTION BOX		
	CURB INLET		
	GRATE INLET		
	CONCRETE DRAIN		
	CULVERT		
	SOUTHWESTERN BELL MANHOLE & OVERHEAD & BURIED CABLE		
	TELEPHONE BOX		
	STREET LIGHT (CANTILEVERED ON WOODEN POLE)		
	STREET LIGHT (CANTILEVERED ON ORNAMENTAL POLE)		

& @ AB AC AVE	AND AT ALL BELL ASBESTOS CEMENT AVENUE	RJ RT RW  S SAN SPL SPRINK ST STA  STD STL STM SWR SWBT	RESTRAINED JOINT RIGHT RETAINING WALL  SOUTH SANITARY SPECIAL SPRINKLER STREET STATION ALONG BASELINE OR CENTERLINE STANDARD STEEL STORM SEWER SOUTHWESTERN BELL COMMUNICATION COMPANY
B B-B BC BSSN	BASLINE BACK TO BACK BEHIND CURB BUSINESS SIGN	T TBM TOC OR TC TEMP TP TS & V TY TYP	TANGENT TEMPORARY BENCH MARK TOP OF CURB TEMPORARY TOP OF PAVEMENT TAPPING SLEEVE AND VALVE TYPE TYPICAL
CI C CLR CMP COH CONC CONSTR CPE CSG CTMS	CAST IRON CENTERLINE CLEAR CORRUGATED METAL PIPE CITY OF HOUSTON CONCRETE CONSTRUCTION CENTER POINT ENERGY CASING COMPUTERIZED TRANSPORTATION MANAGEMENT SYSTEM	UE UG  VC   W W/ WL WLE WM WP WV	UTILITY EASEMENT UNDERGROUND  VERTICAL CURVE  WEST WITH WATER LINE WATER LINE EASEMENT WATER METER WOOD POLE WATER VALVE
DI DIA DR DWG	DUCTILE IRON DIAMETER DRIVE DRAWING		
E EL OR ELEV EOP ESP E/R ESMT EXIST	EAST ELEVATION EDGE OF PAVEMENT EXTRA STRENGTH PIPE END OF CURB RETURN EASEMENT EXISTING		
FC F-F FH FL FT	FACE OF CURB FACE-TO-FACE FIRE HYDRANT FLOWLINE FEET		
GV & B	GATE VALVE AND BOX		
HL & P HMAC HPS HWY	HOUSTON LIGHTING AND POWER HOT MIXED ASPHALTIC CONCRETE HIGH-PRESSURE SODIUM HIGHWAY		
ID IE IP IR	INSIDE DIAMETER INVERT ELEVATION IRON PIPE IRON ROD		
JT JUNC	JOINT JUNCTION		
LF LN LPST LT	LINEAR FEET LANE LEAKING PETROLEUM STORAGE TANK LEFT		
MAX METRO MH MIN MON MRC	MAXIMUM METROPOLITAN TRANSIT AUTHORITY MANHOLE MINIMUM MONUMENT MONOLITHIC REINFORCED CONCRETE		
N NFV NO NTS	NORTH NOT FIELD VERIFIED NUMBER NOT TO SCALE		
OCEL OFS OLE OH	ON CURVE ELEVATION OFFSET OVERHEAD ELECTRICAL OVERHEAD		
PC PCC PCCP PERM PI PPCA PROP PT PT PVC	POINT OF CURVATURE POINT OF COMPOUND CURVATURE PRESTRESSED CONCRETE CYLINDER PIPE PERMANENT POINT OF INTERSECTION POTENTIALLY PETROLEUM CONTAMINATED AREA PROPOSED POINT POINT OF TANGENCY POINT OF VERTICAL CURVATURE, POLYVINYL CHLORIDE PIPE POINT OF VERTICAL INTERSECTION PAVEMENT POINT OF VERTICAL TANGENCY		
PVI PVM PVT			
R RCB RCP REINF REMOV ROW RD RRPM	RECORD DRAWING RADIUS OF CIRCULAR CURVE REINFORCED CONCRETE BOX REINFORCED CONCRETE PIPE REINFORCED REMOVABLE RIGHT OF WAY ROAD REFLECTIVE REMOVABLE PAVEMENT MARKERS		

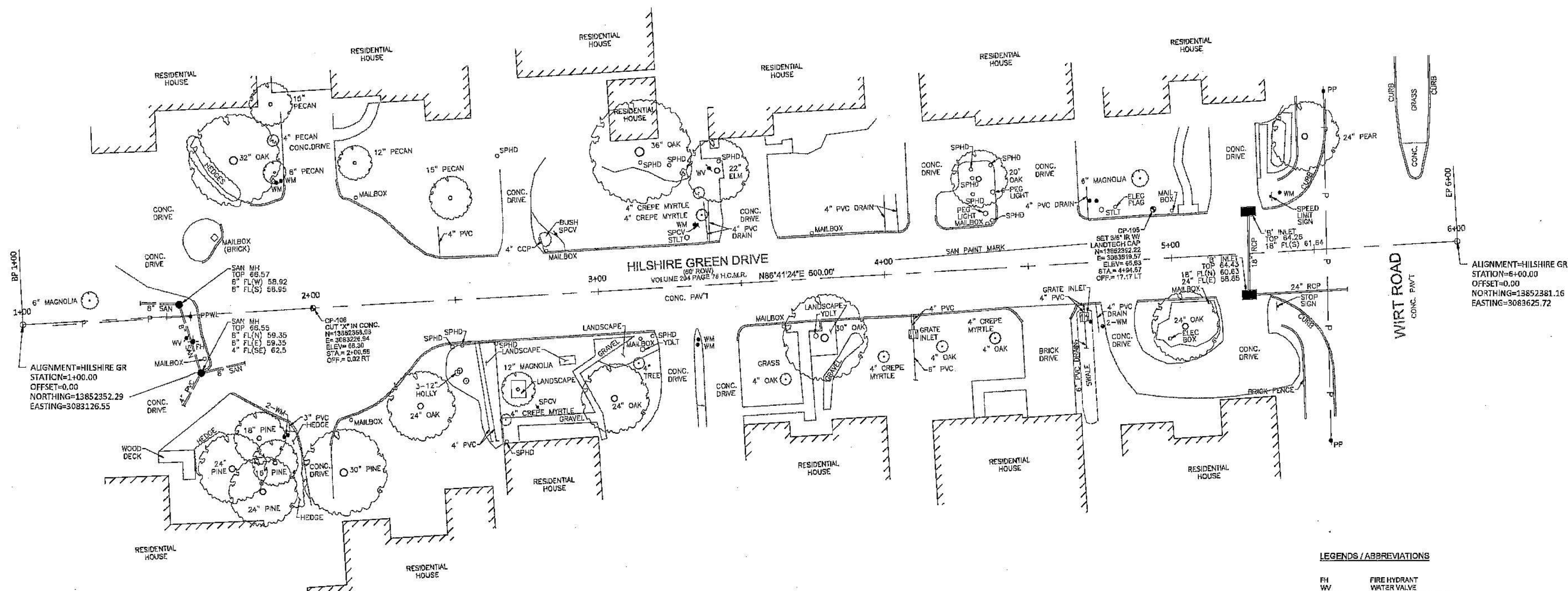




# SURVEY CONTROL SHEET

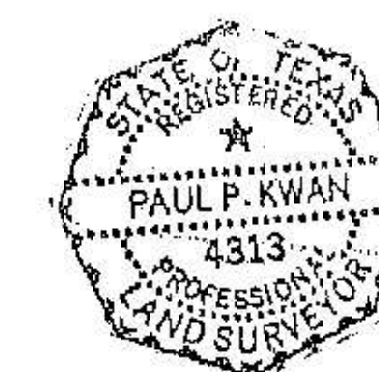
## BENCHMARK

CITY OF HOUSTON MONUMENT  
5159-0303 BRASS DISK ON  
ESPLANADE AT THE INTERSECTION  
OF WIRT ROAD AND JANAK DRIVE  
ELEVATION= 68.68 FT.  
NAVD 88 (2001 ADJUSTMENT)



## LEGENDS / ABBREVIATIONS

FH	FIRE HYDRANT
WM	WATER VALVE
SPCV	SPRINKLE CONTROL VALVE
SPHD	SPRINKLE HEAD
WM	WATER METER
SAN MH	SANITARY MANHOLE
PPWL	POWER POLE WITH LIGHT
PP	POWER POLE
YOLT	YARD LIGHT
STLT	STREET LIGHT
F/B	FLOWER BED



*Paul Kwan*  
10/21/24

# LANDTECH

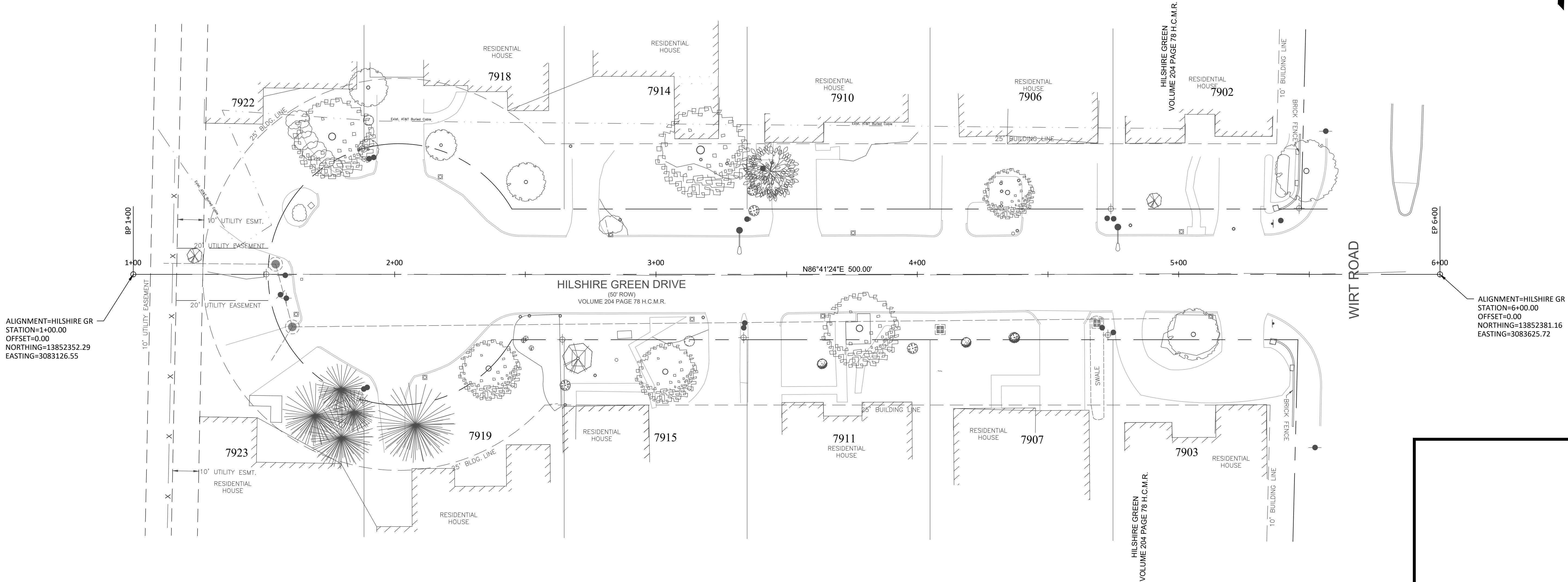
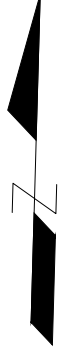
1315 W SAM HOUSTON PARKWAY N, Suite 100,  
Houston, Texas 77043  
T: 713-861-7068  
F: 713-861-4131

TBPELS Registration No. 10019100

DATE: 10/17/24  
SCALE: AS SHOWN  
DRAWING No.:  
JOB No.: 2420005  
SHEET No.: 4 OF 23



BENCHMARK:  
SEE SURVEY CONTROL MAP SHEETS 4 AND 5.



MK.	DESCRIPTION	DATE	DWN.	CHK.



*Ngoc Kim Le*  
10-28-2024



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(713) 622-9264 • Fax (713) 622-9265 • www.hdrinc.com

City of Hilshire Village, Texas

Hilshire Green Drive  
Paving, Drainage & Utility Improvements

Hilshire Green Drive  
Baseline Control

Job No.: 10408611  
Date: October, 2024  
Dwn By: G.S. Fuller  
Chkd By: E. Him

Scale:  
HORZ : 20'  
VERT : 2'  
ONE INCH  
IF ABOVE MARK DOES NOT  
MEASURE ONE INCH, THEN  
THIS DWG. NOT TO SCALE

SHEET  
**5**  
OF 23







1. IF THE CONTRACTOR CHOOSES TO USE A DIFFERENT METHOD OF "TRAFFIC CONTROL PLAN" DURING CONSTRUCTION THAN WHAT IS OUTLINED IN CONTRACT DRAWINGS HE/SHE SHALL BE RESPONSIBLE TO PREPARE AND SUBMIT AN ALTERNATIVE SET OF PLANS TO PLAN REVIEW FOR APPROVAL THREE WEEKS PRIOR TO BEGINNING CONSTRUCTION. THESE PLANS SHALL BE DRAWN TO SCALE AND SEALED BY A P.E. IN THE STATE OF TEXAS.
2. THE CONTRACTOR SHALL PROVIDE AND INSTALL TRAFFIC CONTROL DEVICES IN CONFORMANCE WITH PART VI OF TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (TXMUTCD - LATEST EDITION WITH REVISIONS) DURING CONSTRUCTION. FOR A 30 MPH ROADWAY, SIGNS SHALL BE PLACED MIN. 120' APART PER MINIMUM SIGN SPACING DISTANCE 'X' FROM "TRAFFIC CONTROL PLAN ONE-LANE TWO-WAY TRAFFIC CONTROL" DETAIL.
3. THE CONTRACTOR SHALL NOTIFY CITY 72 HOURS PRIOR TO INSTALLING TRAFFIC CONTROL DEVICES.
4. THE TCP PLAN SHALL BE COORDINATED WITH ALL LOCAL AGENCIES AND SERVICES THAT MAY BE IMPACTED BY THE CONSTRUCTION, INCLUDING BUT NOT LIMITED TO EMERGENCY RESPONSE AGENCIES SUCH AS CITY POLICE DEPARTMENT, FIRE DEPARTMENT, TRASH PICKUP, USPS, SCHOOLS, AND TXDOT.
5. NO WORK WILL BE ALLOWED ON SATURDAYS OR HOLIDAYS, WITHOUT PRIOR AUTHORIZATION BY CITY STAFF.
6. THE CONTRACTOR SHALL NOT STORE ANY CONSTRUCTION MATERIALS IN SUCH A MANNER AS TO OBSTRUCT VEHICLE DRIVER SIGHT DISTANCES.
7. ALL SIGNS, WARNING DEVICES, AND BARRICADES ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR, INCLUDING ACTS OF VANDALISM OR ACCIDENT. THE CONTRACTOR SHALL INSURE THAT ALL BARRICADES, SIGNS, CHANNELIZING DEVICES, WARNING LIGHTS, TRAFFIC HANDLING DEVICES, AND TEMPORARY AND EXISTING PAVEMENT MARKINGS ARE MAINTAINED IN A CLEAN FUNCTIONAL CONDITION AT ALL TIMES.
8. THE CONTRACTOR SHALL REMOVE ALL EXISTING SIGNS WHICH ARE IN CONFLICT WITH THE CONSTRUCTION SIGNS.
9. 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. PROJECT SITE AND PROPOSED IMPROVEMENTS TO BE MAINTAINED AND CONTRACTOR TO CLEAN UP AT THE END OF EACH DAY AS APPROVED BY THE ENGINEER AND CITY.
10. THE CITY HAS THE RIGHT TO DEMAND THE INSTALLATION OF ADDITIONAL TRAFFIC CONTROL DEVICES OR MODIFICATIONS OF THESE PLANS AND NOTES, AS DEEMED NECESSARY TO PROMOTE THE SAFE AND ORDERLY FLOW OF TRAFFIC, INCLUDING PEDESTRIANS AND BICYCLES, THROUGH THE CONSTRUCTION WORK ZONE. THE CONTRACTOR SHALL COMPLY WITH THESE ADDITIONAL REQUESTS OR MODIFICATIONS WITH DUE DILIGENCE.
11. 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 OF CONTRACTOR PROVIDED CERTIFIED FLAGGER/OFF-DUTY OFFICER.
12. ACCESS TO DRIVEWAYS ADJACENT TO THE CONSTRUCTION WORK ZONE SHALL BE MAINTAINED AT ALL TIMES. ADDITIONAL CONES AND DELINEATORS MAY BE REQUIRED TO DELINEATE THE DRIVEWAY ACCESS ROUTE THROUGH THE CONSTRUCTION ZONE. A MINIMUM OF A 10' TRAVEL LANE SHALL BE MAINTAINED AT ALL TIMES.
13. CONTRACTOR SHALL PROVIDE A TEMPORARY DRIVEWAY FOR RESIDENTS UNTIL THE DRIVEWAY HAS BEEN REPLACED. THIS SHALL BE INCIDENTAL TO THE TRAFFIC CONTROL PAY ITEM.
14. CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE RESIDENTS A MINIMUM OF 7 DAYS PRIOR TO WORKING IN FRONT OF THEIR PROPERTY.
15. SPILLAGE RESULTING FROM HAULING OPERATIONS ALONG OR ACROSS ANY PUBLIC TRAVELED WAY SHALL BE REMOVED IMMEDIATELY BY THE CONTRACTOR.
16. THE CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE THROUGHOUT THE PROJECT AT ALL TIMES.
17. THE CONTRACTOR SHALL COORDINATE HIS SCHEDULE OF WORK WITH UTILITY OWNERS, BOTH PUBLIC AND PRIVATE. UTILITY OWNERS MAY HAVE THERE OWN FORCES OR CONTRACTORS RELOCATING FACILITIES REQUIRED BY THE NEW CONSTRUCTION, THE CONTRACTOR SHALL COORDINATE AND COOPERATE WITH THESE OTHER FORCES OR CONTRACTORS.
18. FLASHING WARNING LIGHTS AND/OR FLAGS MAY BE USED TO CALL ATTENTION TO THE ADVANCE WARNING SIGNS.
19. ALL WORK SHALL BE PURSUED IN ACCORDANCE WITH CITY ORDINANCE NO. 40-28. NO WORK SHALL BE DONE ON HILSHIRE GREEN DRIVE IN THE ROADWAY BETWEEN HOURS OF 7:00 AM TO 9:00 AM AND 4:00 PM TO 6:00 PM, MONDAY-FRIDAY. ALL OTHER ROADWAYS SHALL HAVE WORKING HOURS OF 7:00 AM TO 6:00 PM.
20. CONTRACTOR SHALL COVER OPEN EXCAVATIONS DURING NON-WORKING HOURS. ANCHORED STEEL PLATES SHALL BE USED TO COVER EXCAVATION WITHIN THE PAVEMENT, EXCAVATIONS OUTSIDE OF PAVEMENT SHALL BE COVERED AND ENCLOSED IN CONSTRUCTION FENCING AND OPEN THE LANES FOR TRAFFIC.

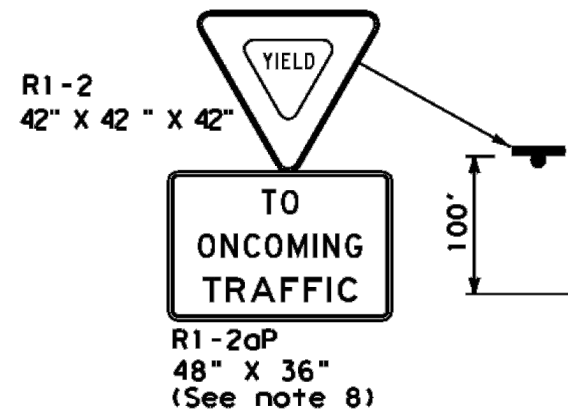
MK.	DESCRIPTION				DATE	DWN.	CHK.		
<div style="text-align: center;"> <i>Ngoc Kim Le</i> 10-28-2024</div>									
<div style="text-align: center;"> HDR Engineering Inc., Texas Reg. No. 754 4828 Loop Central Drive, Suite 700 • Houston, Texas 77081 (713) 622-9264 • Fax (713) 622-9265 • www.hdrinc.com</div>									
City of Hilshire Village, Texas									
Hilshire Green Drive Paving, Drainage & Utility Improvements									
TRAFFIC CONTROL PLAN GENERAL NOTES									
Job No.: 10408611				Scale: HORZ : VERT : NA [ ONE INCH ]			SHEET		
Date: October, 2024							7		
Dwn By: G.S. Fuller				IF ABOVE MARK DOES NOT MEASURE ONE INCH, THEN THIS DWG. NOT TO SCALE					
Chkd By: E. Him							OF 23		



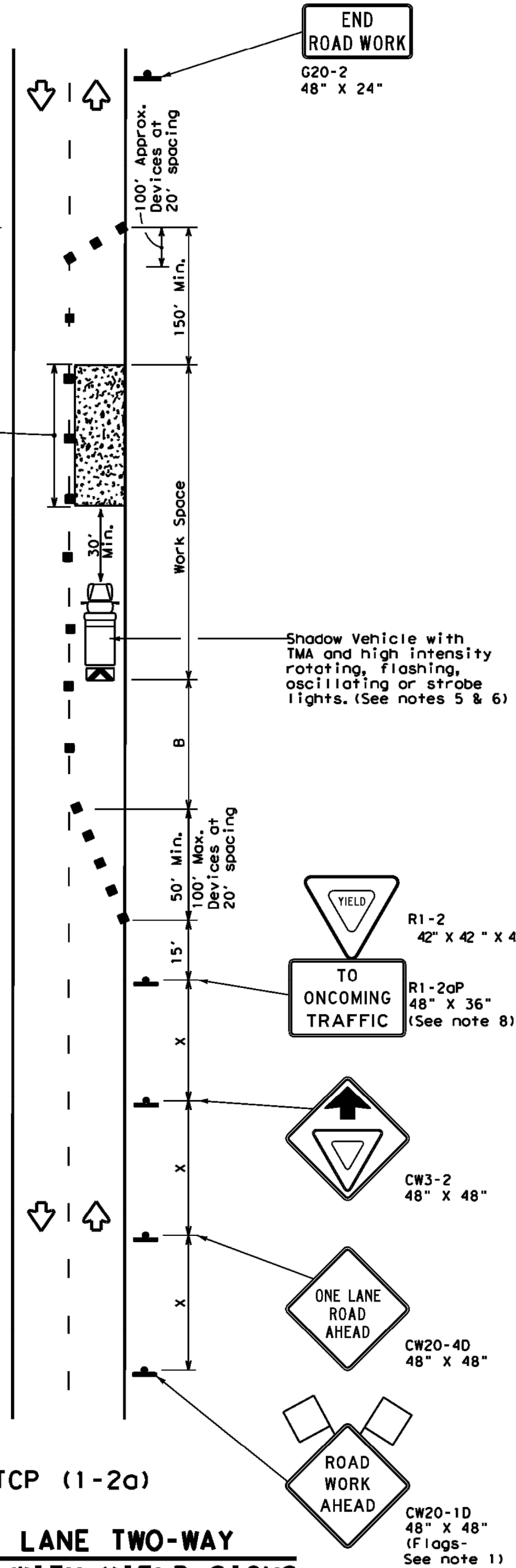
DISCLAIMER: The use of this standard is governed by the "Texas Engineering Practice Act". No warranty of any kind is made by TxDOT for any purpose whatsoever. TxDOT assumes no responsibility for the conversion of this standard to other formats or for incorrect results or damages resulting from its use.

DATE: FILE:

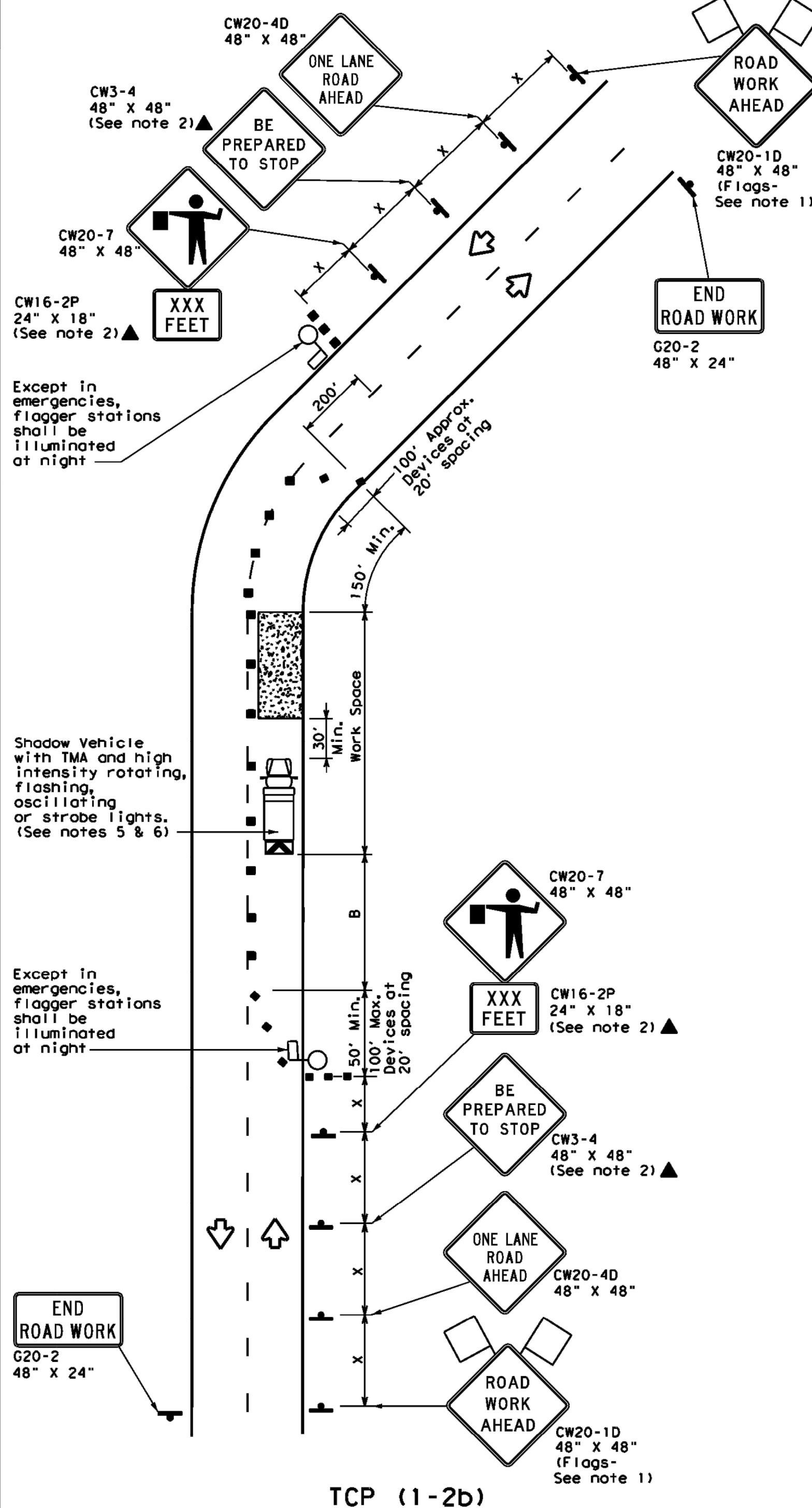
Warning Sign Sequence in Opposite Direction Same as Below



Channelizing devices separate work space from traveled way



**ONE LANE TWO-WAY CONTROL WITH YIELD SIGNS**  
(Less than 2000 ADT - See note 7)



**ONE LANE TWO-WAY CONTROL WITH FLAGGERS**

LEGEND					
	Type 3 Barricade		Channelizing Devices		Truck Mounted Attenuator (TMA)
	Heavy Work Vehicle		Trailer Mounted Flashing Arrow Board		Portable Changeable Message Sign (PCMS)
	Sign		Traffic Flow		Flagger

Posted Speed *	Formula	Minimum Desirable Taper Lengths * %			Suggested Maximum Spacing of Channelizing Devices		Minimum Sign Spacing "A"	Suggested Longitudinal Buffer Space "B"	Stopping Sight Distance
		10' Offset	11' Offset	12' Offset	On a Taper	On a Tangent			
30	$L = \frac{WS^2}{60}$	150'	165'	180'	30'	60'	120'	90'	200'
35		205'	225'	245'	35'	70'	160'	120'	250'
40		265'	295'	320'	40'	80'	240'	155'	305'
45	L = WS	450'	495'	540'	45'	90'	320'	195'	360'
50		500'	550'	600'	50'	100'	400'	240'	425'
55		550'	605'	660'	55'	110'	500'	295'	495'
60		600'	660'	720'	60'	120'	600'	350'	570'
65		650'	715'	780'	65'	130'	700'	410'	645'
70		700'	770'	840'	70'	140'	800'	475'	730'
75		750'	825'	900'	75'	150'	900'	540'	820'

\* Conventional Roads Only  
\*\* Taper lengths have been rounded off.  
L=Length of Taper (FT) W=Width of Offset (FT) S=Posted Speed (MPH)

TYPICAL USAGE				
MOBILE	SHORT DURATION	SHORT TERM STATIONARY	INTERMEDIATE TERM STATIONARY	LONG TERM STATIONARY
	✓	✓		

- GENERAL NOTES**
- Flags attached to signs where shown are REQUIRED.
  - All traffic control devices illustrated are REQUIRED, except those denoted with the triangle symbol may be omitted when stated elsewhere in the plans, or for routine maintenance work, when approved by the Engineer.
  - The CW3-4 "BE PREPARED TO STOP" sign may be installed after the CW20-4D "ONE LANE ROAD AHEAD" sign, but proper sign spacing shall be maintained.
  - Sign spacing may be increased or an additional CW20-1D "ROAD WORK AHEAD" sign may be used if advance warning ahead of the flagger or R1-2 "YIELD" sign is less than 1500 feet.
  - A Shadow Vehicle with a TMA should be used anytime it can be positioned 30 to 100 feet in advance of the area of crew exposure without adversely affecting the performance or quality of the work. If workers are no longer present but road or work conditions require the traffic control to remain in place, Type 3 Barricades or other channelizing devices may be substituted for the Shadow Vehicle and TMA.
  - Additional Shadow Vehicles with TMAs may be positioned off the paved surface, next to those shown in order to protect wider work spaces.
- TCP (1-2a)**
- R1-2 "YIELD" sign traffic control may be used on projects with approaches that have adequate sight distance. For projects in urban areas, work spaces should be no longer than one half city block. In rural areas on roadways with less than 2000 ADT, work spaces should be no longer than 400 feet.
  - R1-2 "YIELD" sign with R1-2aP "TO ONCOMING TRAFFIC" plaque shall be placed on a support at a 7 foot minimum mounting height.
- TCP (1-2b)**
- Flaggers should use two-way radios or other methods of communication to control traffic.
  - Length of work space should be based on the ability of flaggers to communicate.
  - If the work space is located near a horizontal or vertical curve, the buffer distances should be increased in order to maintain adequate stopping sight distance to the flagger and a queue of stopped vehicles (see table above).
  - Channelizing devices on the center-line may be omitted when a pilot car is leading traffic and approved by the Engineer.
  - Flaggers should use 24" STOP/SLOW paddles to control traffic. Flags should be limited to emergency situations.

**Texas Department of Transportation**

**Traffic Operations Division Standard**

**TRAFFIC CONTROL PLAN**  
**ONE-LANE TWO-WAY**  
**TRAFFIC CONTROL**  
**TCP (1-2) - 18**

PK.	DESCRIPTION	DATE	DWN.	CHK.
-----	-------------	------	------	------

Type Kim He  
10-28-2024

HDR Engineering Inc. Texas Reg. No. 754  
4828 Loop Central Drive, Suite 700 • Houston, Texas 77081  
(713) 622-9264 • Fax (713) 622-9265 • www.hdrinc.com

City of Hilshire Village, Texas

Hilshire Green Drive  
Paving, Drainage & Utility Improvements

**ONE-LANE TWO-WAY**  
**TRAFFIC CONTROL DETAIL**

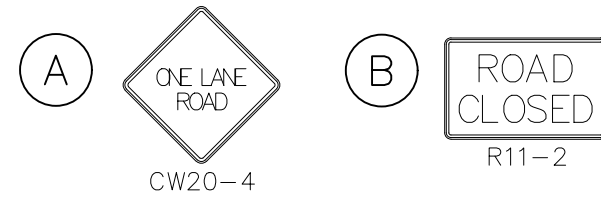
Job No.: 10408611	Scale: HORZ : VERT : NA ONE INCH	SHEET 8
Date: October, 2024	Dwn By: G.S. Fuller	Chkd By: E. Him
IF ABOVE MARK DOES NOT MEASURE ONE INCH, THEN THIS DWG. NOT TO SCALE		



BENCHMARK:  
SEE SURVEY CONTROL MAP SHEETS 4 AND 5.

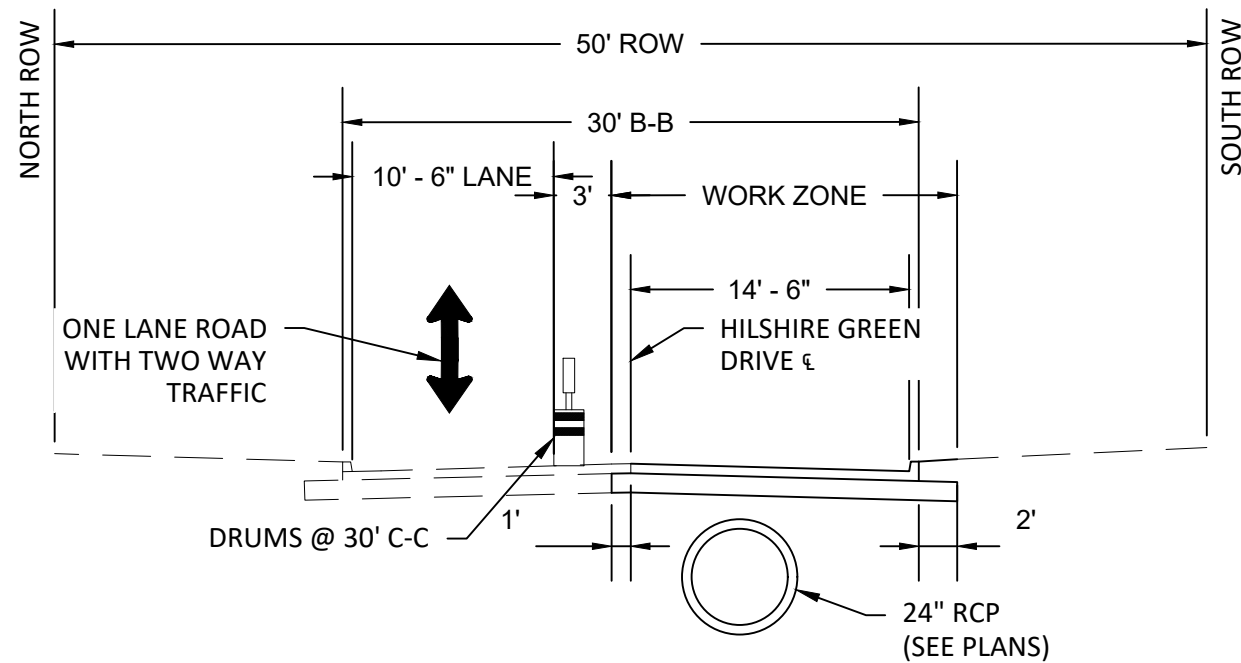
LEGEND

- PHASE TWO CONSTRUCTION  
PHASE THREE CONSTRUCTION  
BARRELS OR DRUMS  
GROUND MOUNTED SIGN  
TYPE III BARRICADE  
PROP DIRECTION OF TRAFFIC  
EXIST DIRECTION OF TRAFFIC



PHASE 1 NOTES:

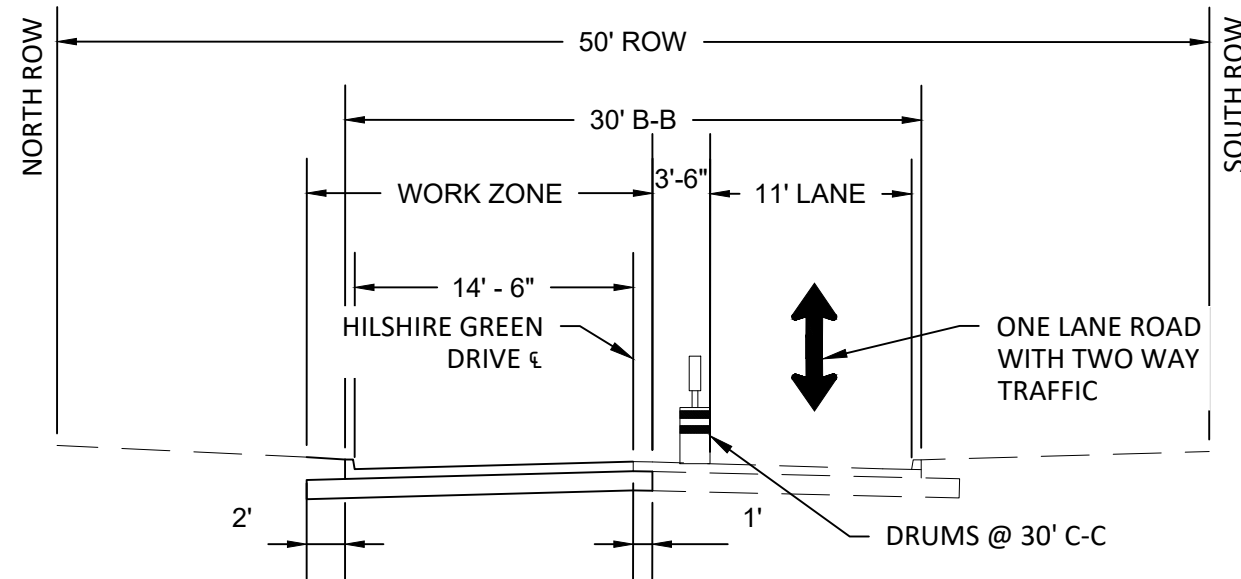
- PLACE EROSION CONTROL ITEMS WHERE APPLICABLE (TYPICAL OF ALL TRAFFIC CONTROL PLAN NARRATIVE SEQUENCE ITEMS.)
- INSTALL UTILITIES ON A ROLLING OPERATION PER "TRAFFIC CONTROL PLAN ONE-LANE TWO-WAY TRAFFIC CONTROL". ONLY ONE UTILITY (WATER LINE OR SANITARY SEWER REHABILITATION) TO BE INSTALLED AT A TIME. CONTRACTOR SHALL COORDINATE WITH CITY PRIOR TO INSTALLING UTILITIES. WHERE INSTALLATION OF UTILITIES ARE UNDER PAVEMENT, CONTRACTOR SHALL BACKFILL AND PLACE TEMPORARY PAVEMENT OR STEEL PLATES TO MAINTAIN ACCESS TO BOTH LANES OF TRAFFIC AT THE END OF EACH WORK DAY (NO SEPARATE PAYMENT).



PHASE 2

PHASE 2 NOTES:

- PLACE EROSION CONTROL ITEMS WHERE APPLICABLE (TYPICAL OF ALL TRAFFIC CONTROL PLAN NARRATIVE SEQUENCE ITEMS.)
- PLACE TRAFFIC CONTROL SIGNS AND DEVICES FOR PHASE 2 IN ACCORDANCE WITH TYPICAL SECTIONS AND PLANS.
- CONSTRUCT STORM SEWER, PAVEMENT, WALKWAYS AND DRIVEWAYS ON SOUTH SIDE OF HILSHIRE GREEN DRIVE.



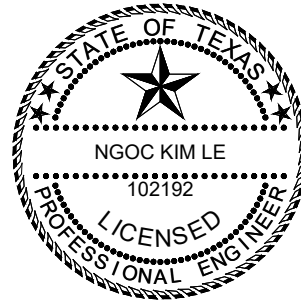
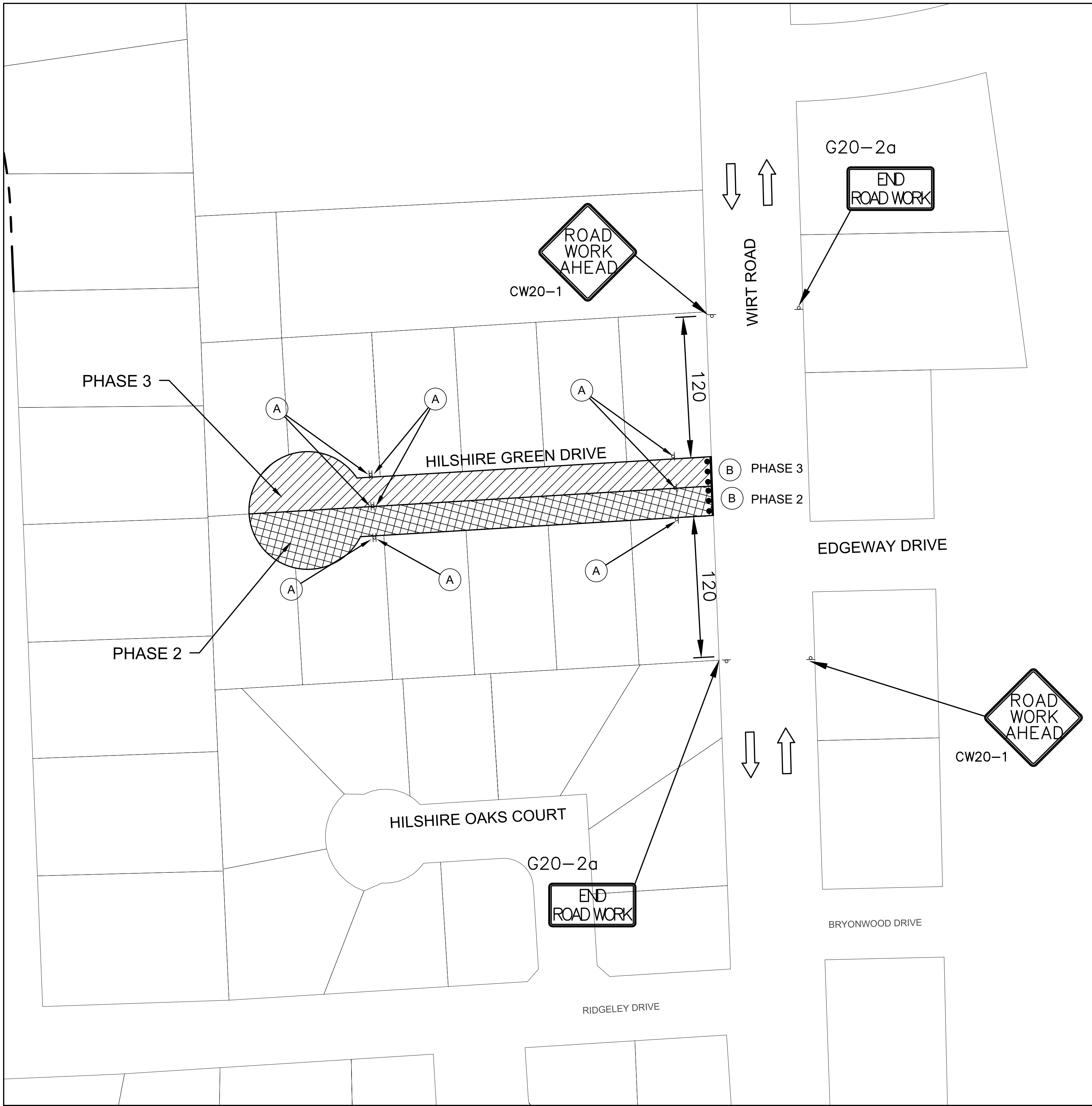
PHASE 3

PHASE 3 NOTES:

- PLACE EROSION CONTROL ITEMS WHERE APPLICABLE (TYPICAL OF ALL TRAFFIC CONTROL PLAN NARRATIVE SEQUENCE ITEMS.)
- PLACE TRAFFIC CONTROL SIGNS AND DEVICES FOR PHASE 3 IN ACCORDANCE WITH TYPICAL SECTIONS AND PLANS.
- CLOSE WESTBOUND LANE OF HILSHIRE GREEN DRIVE WHILE ALLOWING ONE LANE ROAD FOR TWO-WAY LOCAL TRAFFIC.
- CONSTRUCT STORM SEWER, PAVEMENT, WALKWAYS AND DRIVEWAYS ON NORTH SIDE OF HILSHIRE GREEN DRIVE.

NOTES:

- UTILIZE FLAGMEN AS NECESSARY AND INSTALL STORM WATER POLLUTION PREVENTION AND TREE PROTECTION ITEMS.
- CONTRACTOR SHALL COORDINATE WITH THE POLICE & FIRE DEPARTMENT DURING THE CONSTRUCTION PHASE FOR ROAD CLOSURE AND EMERGENCY ACCESS.



Ngoc Kim Le



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Hilshire Green Drive  
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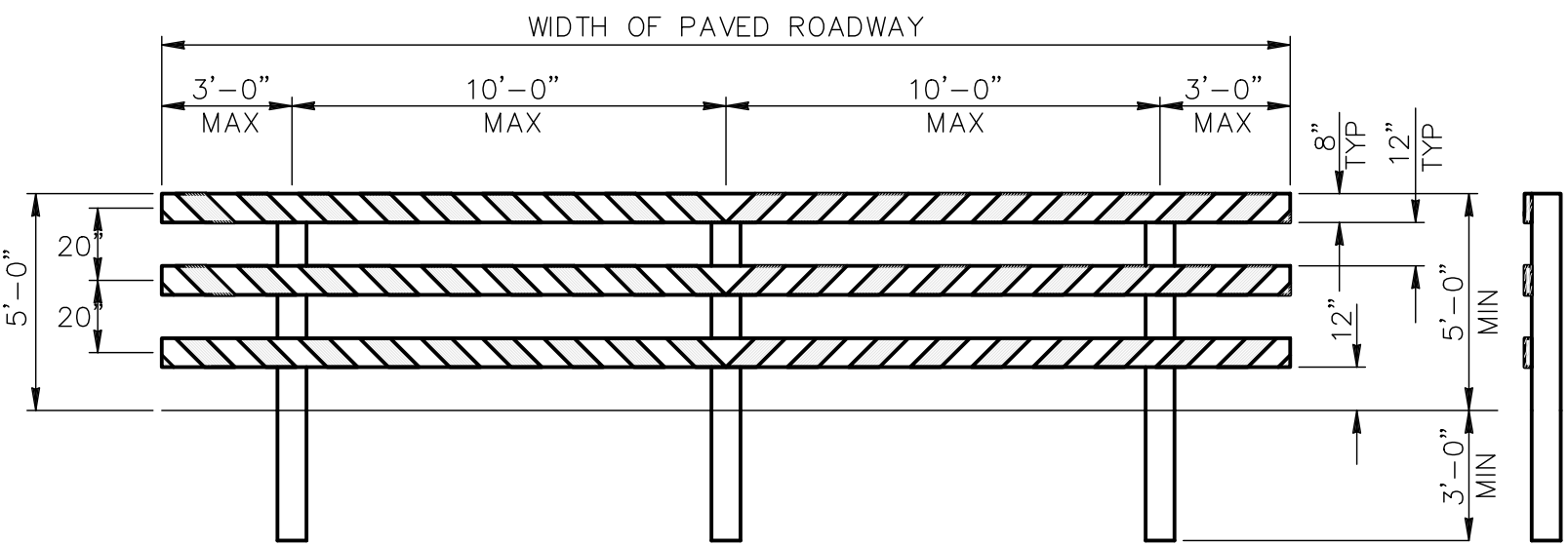
Hilshire Green Drive  
Traffic Control Plan

Job No.: 10408611  
Date: October, 2024  
Dwn By: G.S. Fuller  
Chkd By: E. Him

Scale:  
HORZ : 40  
VERT :  
ONE INCH  
IF ABOVE MARK DOES NOT  
MEASURE ONE INCH, THEN  
THIS DWG. NOT TO SCALE

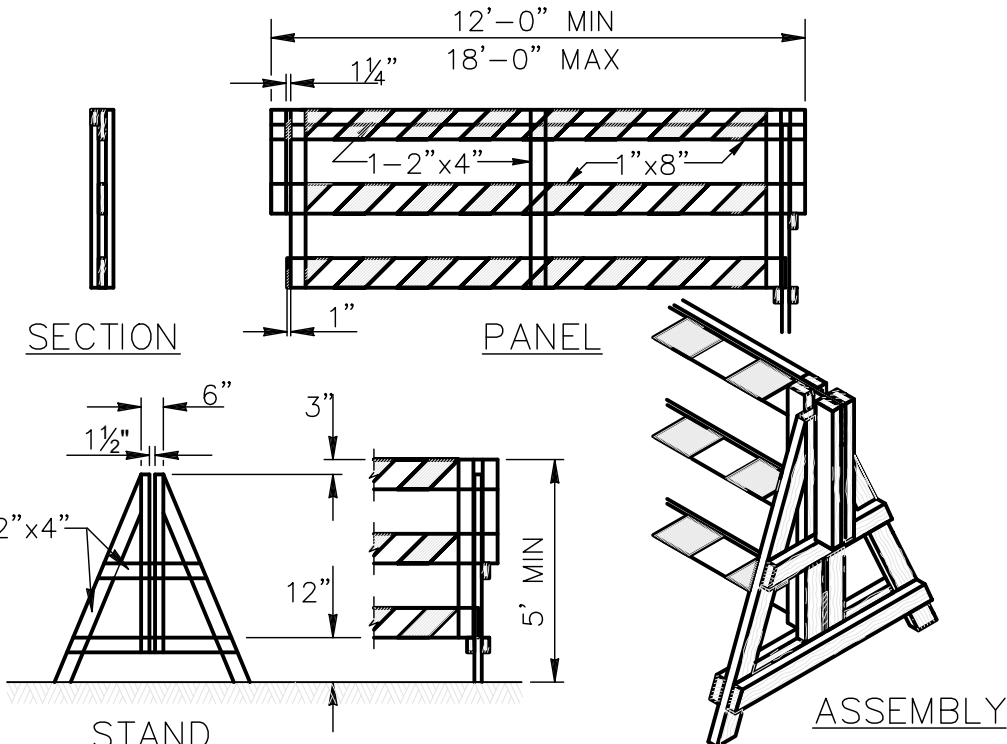
SHEET  
9  
OF 23



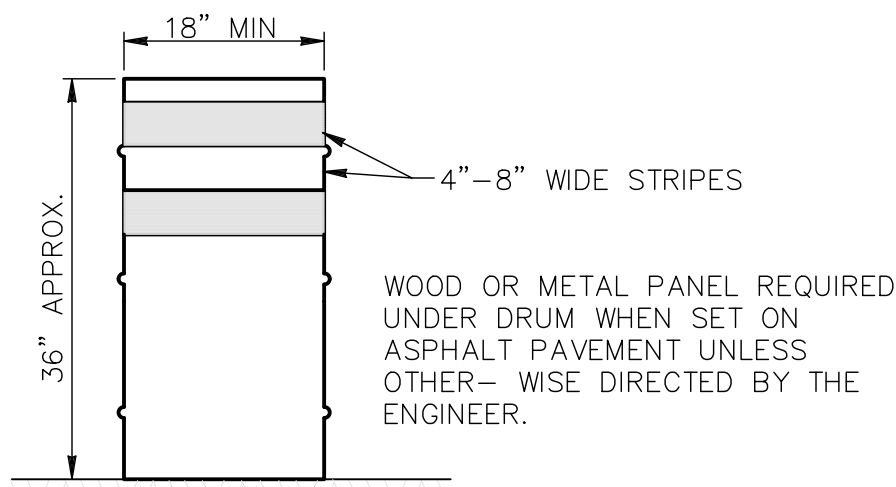


### TYPE III BARRICADE FOR END OF ROAD

FOR TYPE III BARRICADE FOR END OF ROAD, THE THREE (3) RAILS SHALL BE REFLECTIVE RED AND REFLECTIVE WHITE STRIPES ON SIDE FACING TRAFFIC



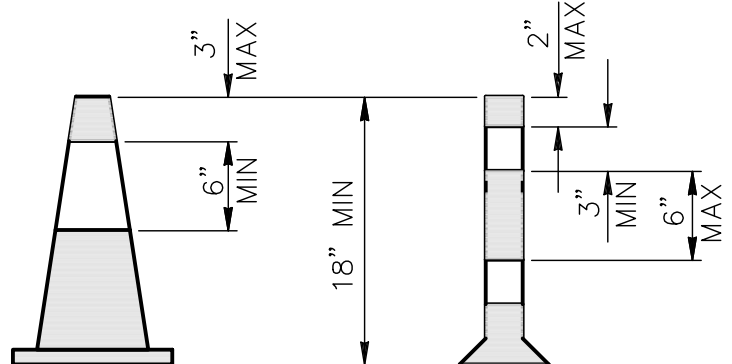
### DEMOUNTABLE TYPE III BARRICADE



### DRUMS

DRUMS, SET ON END, AND USED FOR TRAFFIC WARNING OR CHANNELIZATION SHALL BE APPROX 36" IN HEIGHT AND A MIN OF 18" IN DIAMETER. THE CONTRACTOR, AT HIS OPTION, MAY USE DRUMS MADE FROM STEEL BARRELS OR BLACK POLYETHYLENE PLASTIC DRUM LINERS WEIGHING APPROX EIGHT POUNDS EACH. THE MARKINGS ON DRUMS SHALL BE HORIZONTAL, CIRCUMFERENTIAL, REFLECTORIZED ORANGE AND REFLECTORIZED WHITE STRIPES, 4 TO 8 INCHES WIDE. THE FIRST REFLECTORIZED STRIPE SHOULD START WITHIN TWO (2) INCHES OF THE TOP OF THE DRUM. THERE SHALL BE AT LEAST TWO ORANGE AND TWO WHITE STRIPES ON EACH DRUM. IF THERE ARE NON- REFLECTORIZED SPACES BETWEEN THE HORIZONTAL ORANGE AND WHITE STRIPES, THEY SHALL BE NO MORE THAN 2 INCHES WIDE. METAL DRUMS SHALL BE PAINTED BLACK OR ORANGE BEFORE REFLECTORIZED STRIPES ARE ADDED. ALL DRUMS ON PROJECT WILL BE THE SAME COLOR. WHEN DRUMS ARE PLACED IN THE ROADWAY, APPROPRIATE WARNING SIGNS SHOULD BE USED. DURING HOURS OF DARKNESS, A FLASHING WARNING LIGHT SHOULD BE PLACED ON DRUMS USED SINGLY AS A WARNING DEVICE. STEADY BURN ELECTRIC LIGHTS OR DELINEATORS SHOULD BE PLACED ON DRUMS USED IN SERIES FOR TRAFFIC CHANNELIZATION. DRUMS SHALL BE WEIGHED WITH SAND TO THE EXTENT INDICATED IN THE PLANS.

CW-8 CHEVRON SIGNS, CW-6A ARROW SIGNS OR VP-1 VERTICAL PANELS MOUNTED ABOVE DRUMS MAY BE USED AS SUPPLEMENTS TO DRUM DELINEATION.

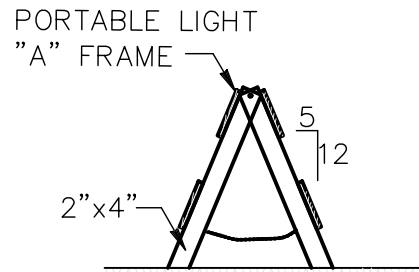


### CONES

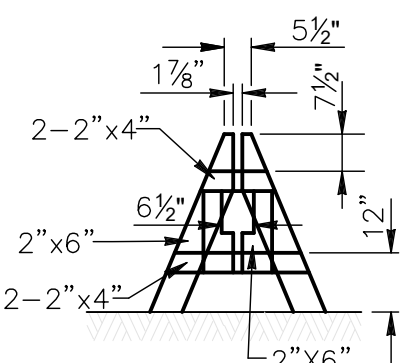
TRAFFIC CONES AND TUBULAR MARKERS SHALL BE A MIN OF 18" INCHES IN HEIGHT WITH A BROADENED BASE AND MAY BE MADE OF VARIOUS MATERIALS TO WITHSTAND IMPACT WITHOUT DAMAGE TO THEMSELVES OR TO VEHICLES. LARGER SIZES SHOULD BE USED ON FREEWAYS AND OTHER ROADWAYS WHERE SPEED ARE RELATIVELY HIGH OR WHERE EVER MORE CONSPICUOUS GUIDANCE IS NEEDED. ORANGE SHALL BE THE PREDOMINANT COLOR ON CONES AND TUBULAR MARKERS. THEY SHOULD BE KEPT CLEAN AND BRIGHT FOR MAX TARGET VALUE. FOR NIGHTTIME USE THEY SHALL BE REFLECTORIZED OR EQUIPPED WITH LIGHTING DEVICES FOR MAX VISIBILITY. REFLECTORIZED MATERIAL SHALL HAVE A SMOOTH, SEALED OUTER SURFACE WHICH WILL DISPLAY THE SAME APPROX COLOR DAY AND NIGHT.

REFLECTORIZATION OF TUBULAR MARKERS SHALL BE A MIN OF TWO THREE-INCH BANDS PLACED A MAX OF 2" FROM THE TOP WITH A MAX OF 6" BETWEEN THE BANDS. REFLECTORIZATION OF CONES SHALL BE PROVIDED BY A MIN 6" BAND PLACED A MAX OF 3" FROM THE TOP.

CONES OR TUBULAR MARKERS ARE GENERALLY ONLY SUITABLE FOR TEMPORARY USAGE (UP TO 8 HOURS) WITH OTHER CHANNELIZATION DEVICES SUCH AS VERTICAL PANELS OR BARRICADES PREFERRED FOR LONGER TERM USAGE. CARE SHOULD BE TAKEN TO INSURE THAT THEY REMAIN IN THEIR PROPER LOCATION AND IN AN UPRIGHT POSITION.



### "A" FRAME



### DEMOUNTABLE

## BARRICADE NOTES

THE MOST RECENT EDITION OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, AND IT'S 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 CHANNELIZING 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 WARN AND DIRECT TRAFFIC.

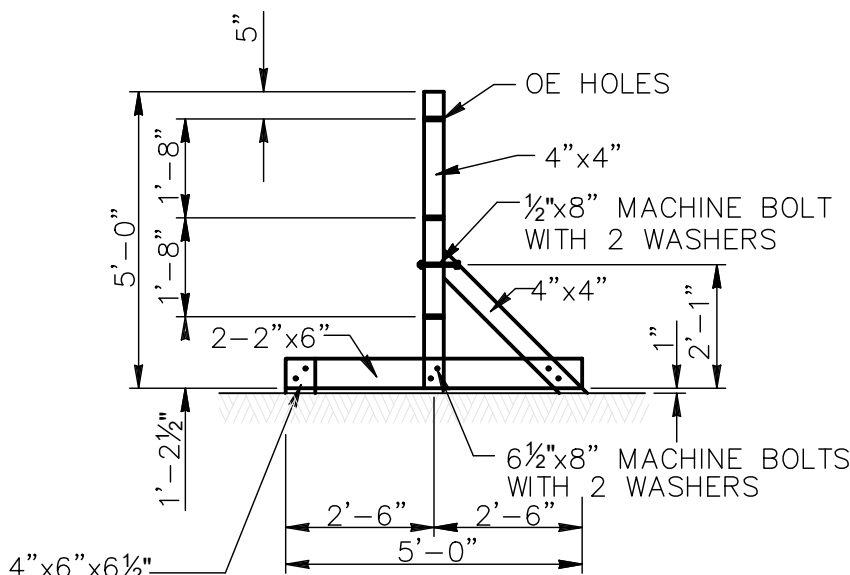
BARRICADES MAY BE DESIGNED AND CONSTRUCTED FROM WOOD OR ANY OTHER SUITABLE MATERIAL IN A MANNER APPROVED BY THE DEPARTMENT OF TRAFFIC AND TRANSPORTATION. THE CONSTRUCTION DETAILS SHOWN HEREON ARE TYPICAL AND ARE SUGGESTED DETAILS FOR WOOD SUPPORT SYSTEMS FOR BARRICADES. THE DETAILS OF RAIL WIDTH AND 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.

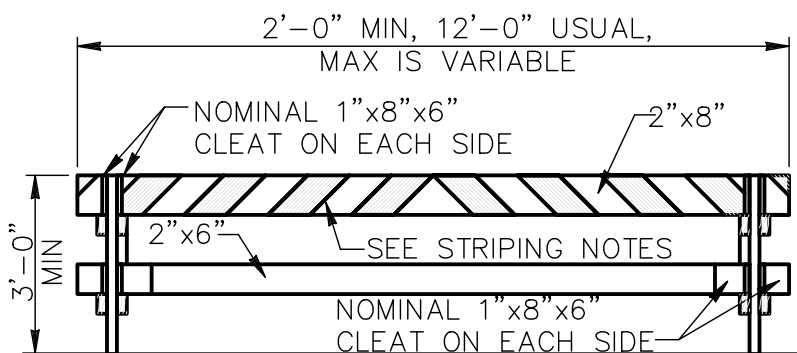
THE REFLECTORIZED WHITE AND REFLECTORIZED ORANGE (REFLECTORIZED RED) STRIPES FOR BARRICADES, DRUMS AND VERTICAL PANELS SHALL BE CONSTRUCTED OF "HIGH INTENSITY" SHEETING AND SHALL BE MAINTAINED TO MEET THE APPEARANCE, COLOR AND REFLECTIVITY REQUIREMENTS SET BY DOT.

THE CONTRACTOR SHALL MAINTAIN EACH BARRICADE IN A CLEAN AND GOOD CONDITION.

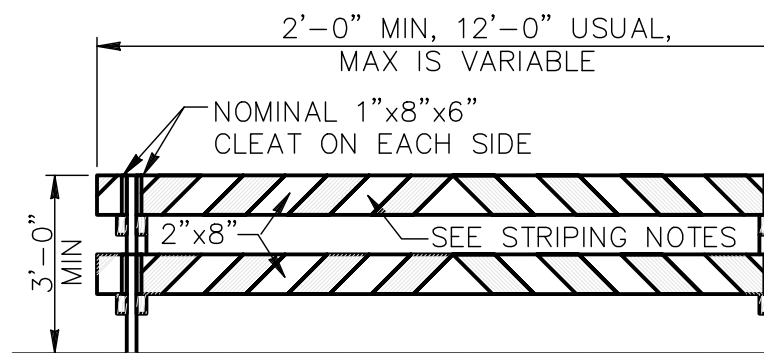
BARRICADES SHALL BE REMOVED UPON COMPLETION OF THE WORK AND/OR THE ELIMINATION OF THE HAZARD ON ANY SECTION.



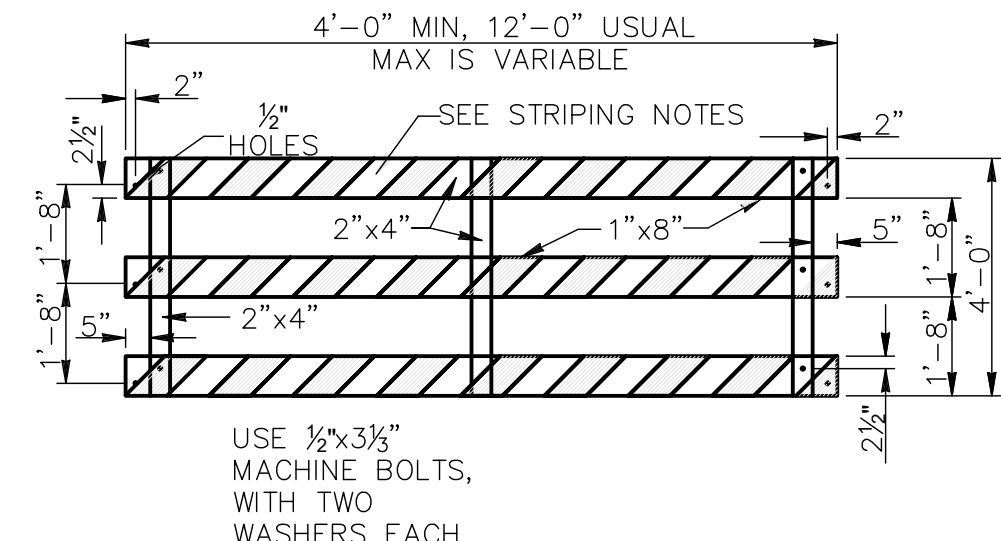
### STAND FOR TYPE III BARRICADE



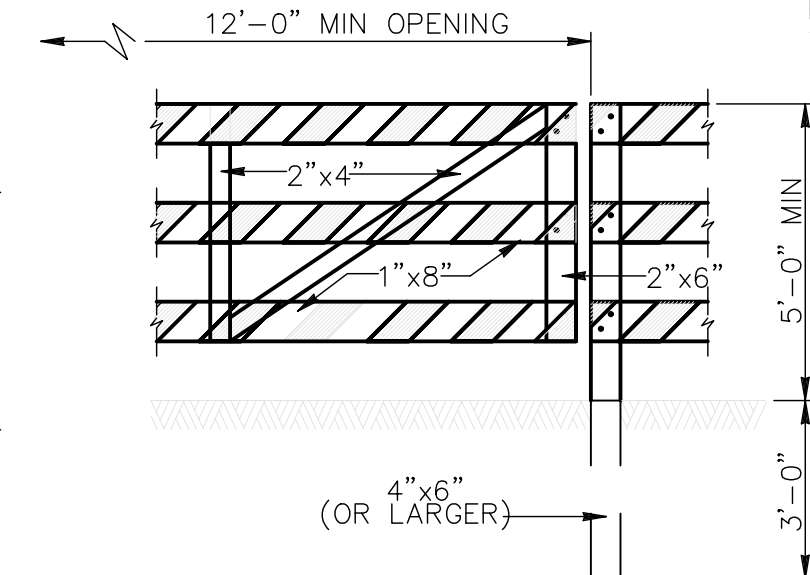
### TYPE I



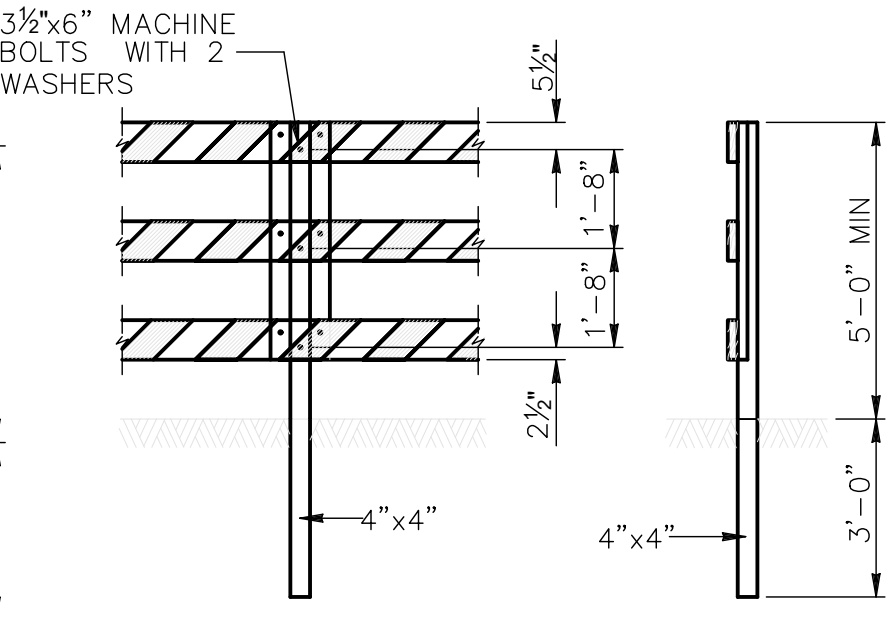
### TYPE II



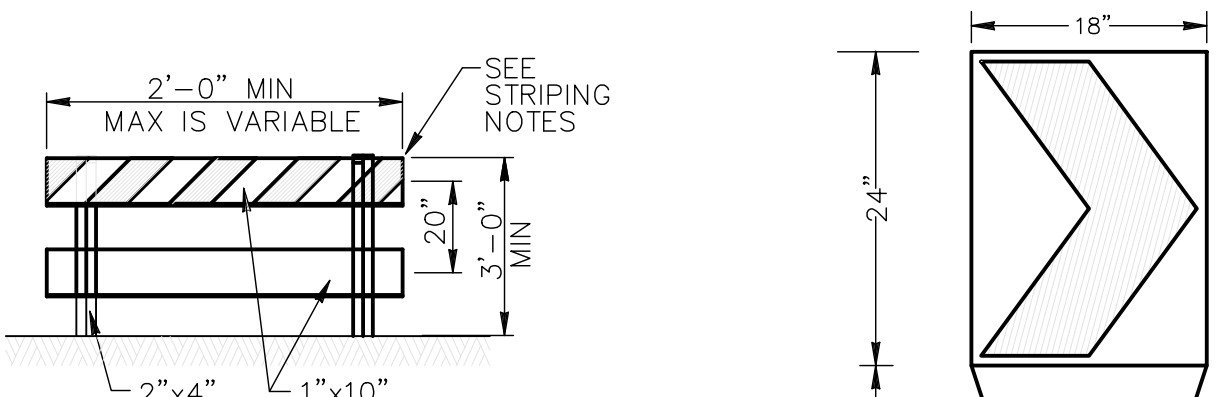
### PANEL FOR TYPE III BARRICADE



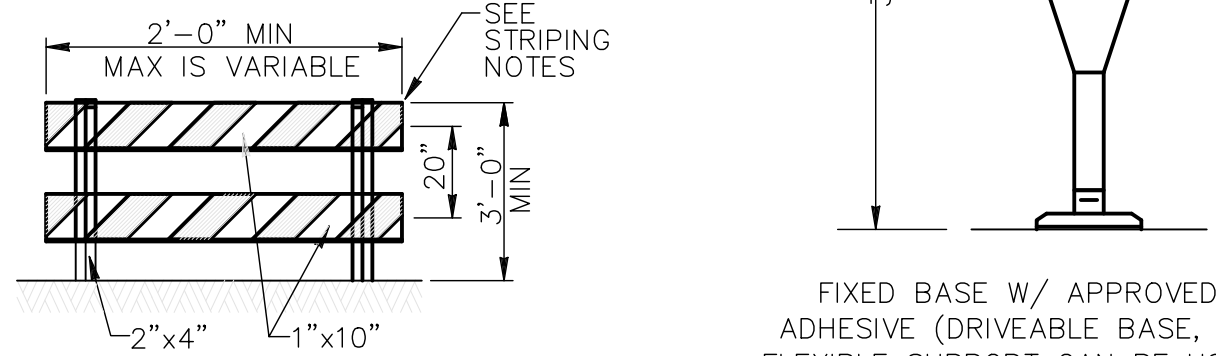
### GATE FOR TYPE III BARRICADE



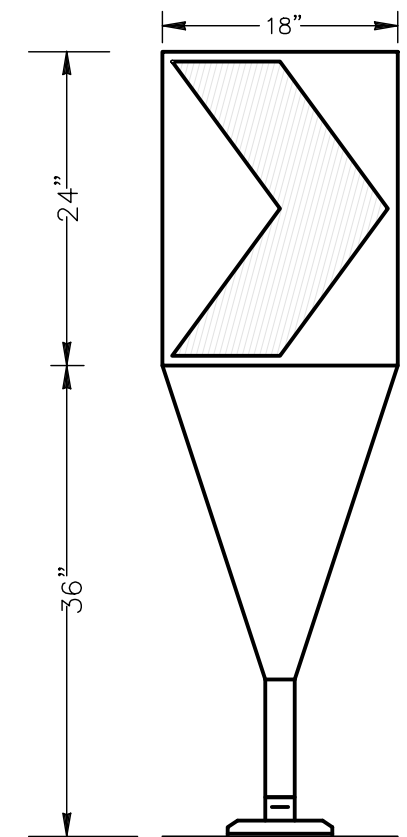
### POST FOR TYPE III BARRICADE



### TYPE I



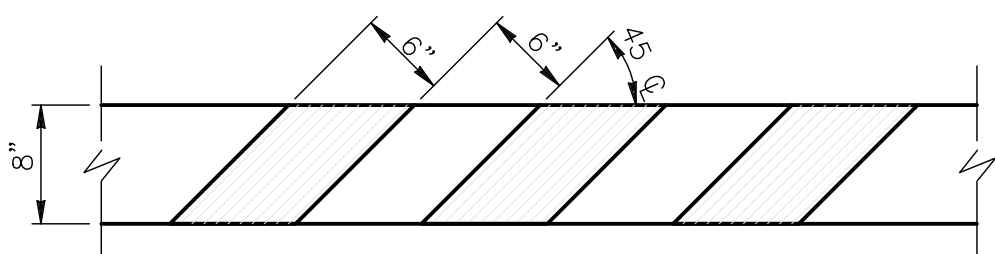
### TYPE II



FIXED BASE W/ APPROVED ADHESIVE (DRIVEABLE BASE, OR FLEXIBLE SUPPORT CAN BE USED)

1. THE CHEVRON SHALL BE A VERTICAL RECTANGLE WITH A MINIMUM SIZE OF 12 BY 18 INCHES.
2. CHEVRONS ARE INTENDED TO GIVE NOTICE OF A SHARP CHANGE OF ALIGNMENT WITH THE DIRECTION OF TRAVEL AND PROVIDE ADDITIONAL EMPHASIS AND GUIDANCE FOR VEHICLE OPERATORS WITH REGARD TO CHANGES IN HORIZONTAL ALIGNMENT OF THE ROADWAY.
3. CHEVRONS, WHEN USED, SHALL BE ERECTED ON THE OUTSIDE OF A SHARP CURVE OR TURN, OR ON THE FAR SIDE OF AN INTERSECTION. THEY SHALL BE IN LINE WITH AND AT RIGHT ANGLES TO APPROACHING TRAFFIC. SPACING SHOULD BE SUCH THAT THE MOTORIST ALWAYS HAS THREE IN VIEW, UNTIL THE CHANGE IN ALIGNMENT ELIMINATES ITS NEED.
4. TO BE EFFECTIVE, THE CHEVRON SHOULD BE VISIBLE FOR AT LEAST 500 FEET.
5. CHEVRONS SHALL BE ORANGE WITH A BLACK NON-REFLECTIVE LEGEND. SHEETING FOR THE CHEVRON SHALL BE RETROREFLECTIVE TYPE E (FLUORESCENT PRISMATIC) CONFORMING TO DEPARTMENTAL MATERIAL SPECIFICATION DMS-8300, UNLESS NOTED PTERWISE. THE LEGEND SHALL BE BLACK VINYL NON-REFLECTIVE DECAL SHEETING MEETING THE REQUIREMENTS OF DMS-8320.

### CHEVRONS

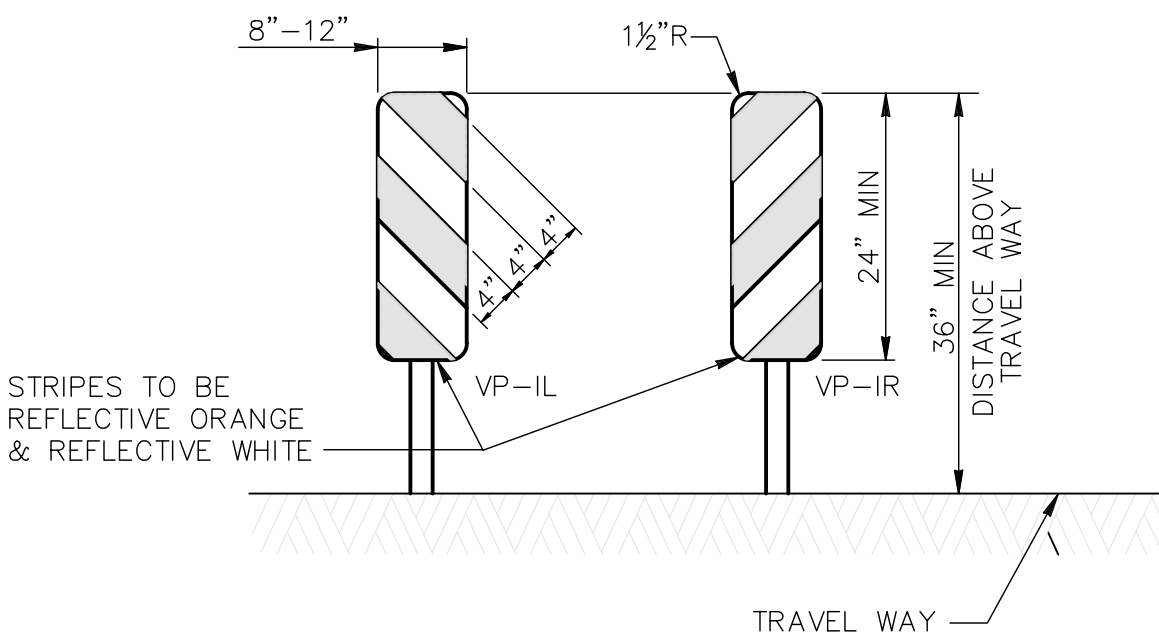


### STRIPING FOR BARRICADE

FOR ALL TYPES OF BARRICADES WITH RAILS LESS THAN 3'-0" LONG, STRIPES 4" WIDE SHALL BE USED. IDENTIFICATION MARKINGS MAY BE SHOWN ONLY ON BACK SIDE OF BARRICADE RAILS.

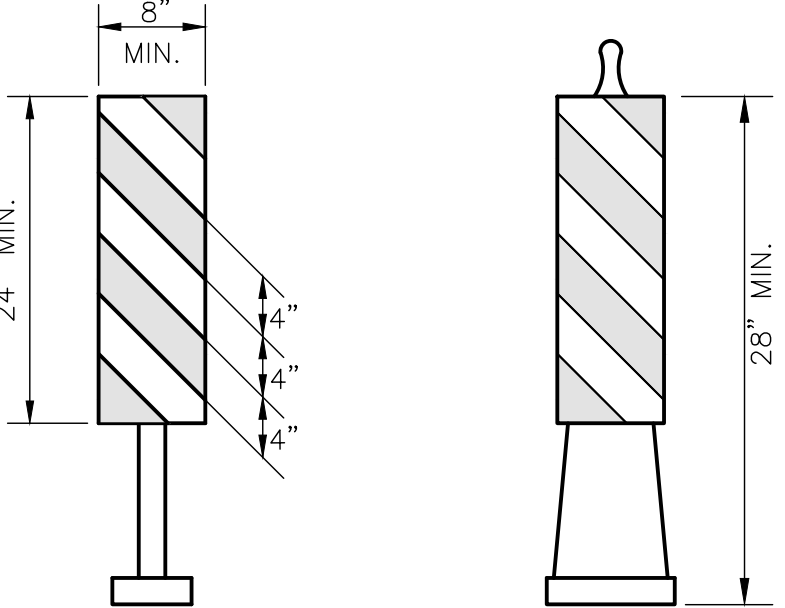
STRIPING SHOULD COVER THE FULL WIDTH OF THE RAIL. STRIPING OF RAILS, PANELS, ETC, SHOULD SLOPE DOWNWARD AT AN ANGLE OF 45° DEGREES IN DIRECTIONS TRAFFIC IS TO PASS.

WHERE A BARRICADE EXTENDS ENTIRELY ACROSS A ROADWAY, IT IS DESIRABLE THAT THE STRIPES SLOPE DOWNWARD IN THE DIRECTION TOWARD WHICH TRAFFIC MUST TURN IN DETOURING. WHEN BOTH RIGHT AND LEFT TURNS ARE PROVIDED FOR, THE CHEVRON STRIPING SHOULD SLOPE DOWNWARD IN BOTH DIRECTIONS FROM THE CENTER OF THE BARRICADE.



### VERTICAL PANELS (VP)

VERTICAL PANELS ARE NORMALLY USED AS CHANNELIZING DEVICES TO INDICATE TANGENT OR NEARLY TANGENT ROADWAY ALIGNMENT WHERE GOOD TARGET VALUE OF A DEVICE IS NEEDED IN DAYTIME AS WELL AS THE NIGHTTIME. IN ADDITION, VERTICAL PANELS SHOULD BE USED AT THE EDGE OF SHOULDER DROP-OFFS AND OTHER SUCH AREAS AS LANE TRANSITIONS WHERE POSITIVE DAY AND NIGHT DELINEATION MAY BE REQUIRED. VERTICAL PANELS SHOULD BE MOUNTED BACK TO BACK IF USED AT THE EDGE OF CUTS ADJACENT TO TWO-WAY TWO LANE ROADWAYS. STRIPES SHOULD ALWAYS SLOPE DOWNWARD TOWARD THE TRAVELED WAY.



### PORTABLE RIGID VERTICAL PANEL

SEE COMPLIANT PRODUCTS LIST FOR ALTERNATE DESIGNS.

1. CHANNELIZING DEVICES ON SELF-RIGHTING SUPPORTS MAY BE A VERTICAL PANEL, OPPOSING LANE DIVIDER OR CHEVRON.
2. CHANNELIZING DEVICES ON SELF-RIGHTING SUPPORTS SHALL BE USED AT LOCATIONS DETAILED ELSEWHERE IN THE PLANS. THESE DEVICES SHALL CONFORM TO THE "TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES".
3. THE CONTRACTOR SHALL MAINTAIN DEVICES IN A CLEAN CONDITION AND REPLACED DAMAGED, NON-REFLECTIVE, FADED, OR BROKEN DEVICES AND BASES AS NECESSARY.
4. PORTABLE BASES SHALL BE FABRICATED FROM VIRGIN AND/OR RECYCLED RUBBER. APPROXIMATE WEIGHT OF PORTABLE BASES SHALL BE 35 LBS.

NO.	DESCRIPTION	DATE	DWN.	CHK.



Nguyen Kim He  
10-28-2024

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City of Hilshire Village, Texas  
Hilshire Green Drive  
Paving, Drainage & Utility Improvements

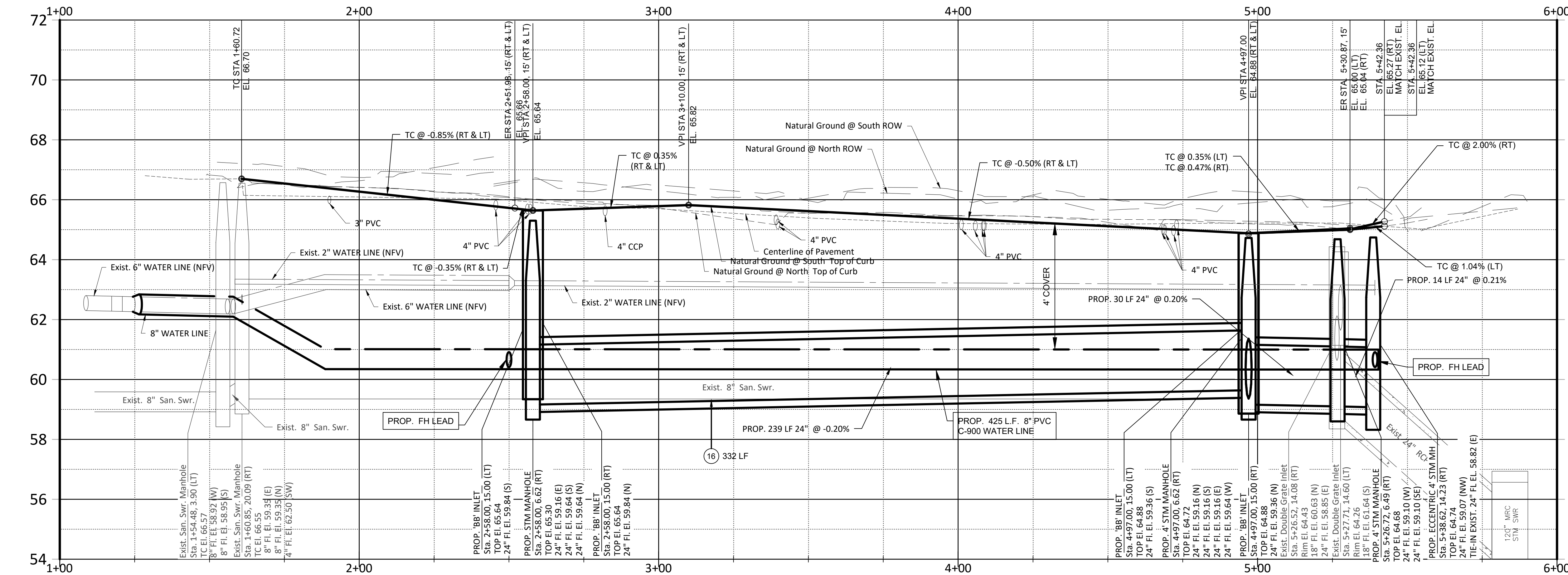
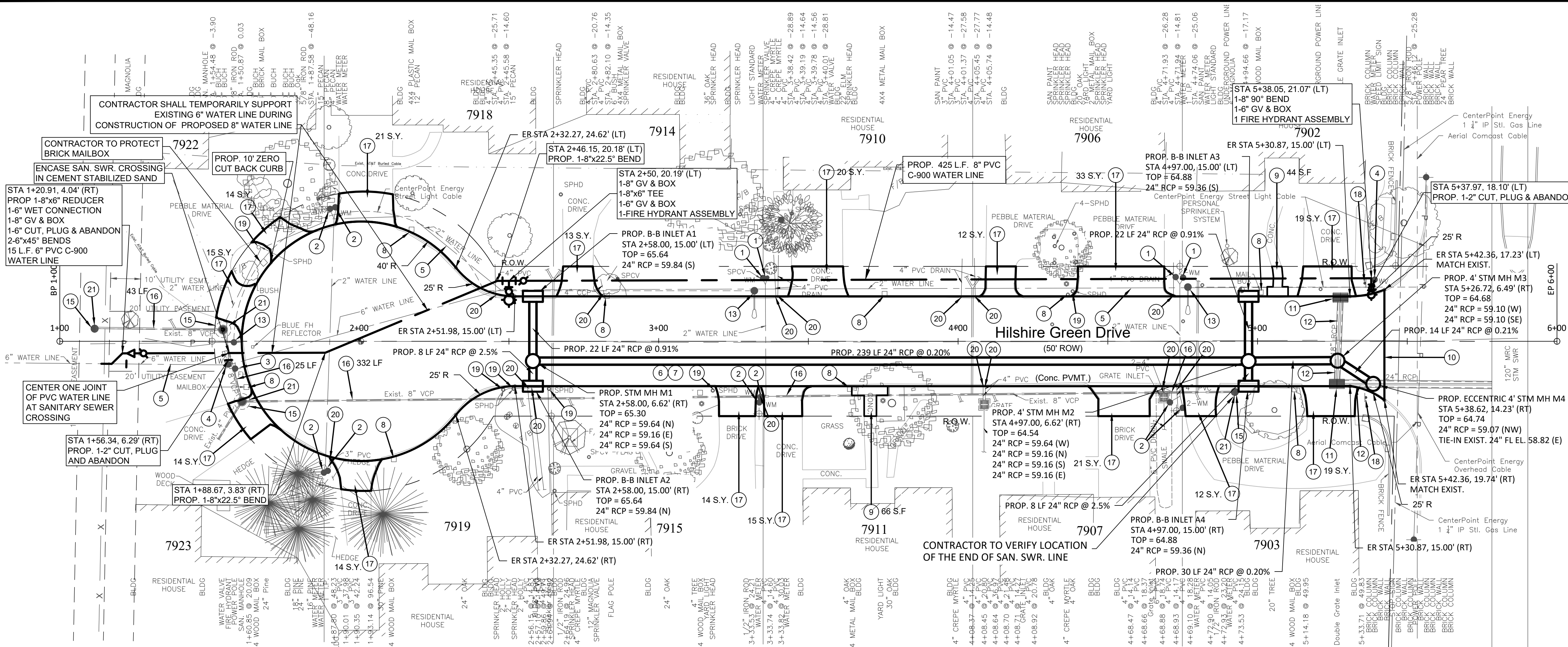
Typical Traffic Control Details			
Job No.: <b>10408611</b>	Scale: <b>HORIZ : NTS</b>	<b>SHEET 10</b>	
Date: <b>October, 2024</b>	VERT : <b>ONE INCH</b>		
Dwn By: <b>G.S. Fuller</b>	IF ABOVE MARK DOES NOT MEASURE ONE INCH, THEN THIS DWG. NOT TO SCALE	<b>OF 23</b>	
Chkd By: <b>E. Hinn</b>			



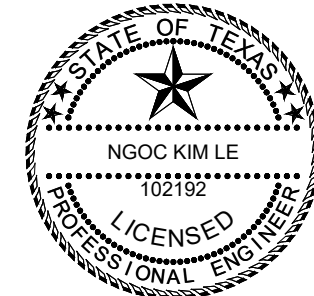
IMPROVEMENTS LEGEND:  
UTILITIES, PAVING & DRAINAGE:

- Proposed 1" Short Side Water Service Replacement with New Meter Box.
- Proposed 1" Long Side Water Service Replacement with New Meter Box.
- Remove and Salvage Existing Fire Hydrants.
- Abandon Existing Water Valve as Per Specifications.
- Abandon Existing Water Line Per Specifications.
- Proposed Concrete Pavement.
- Remove and Dispose of Existing Concrete Pavement and Base Course with Curb.
- Remove and Reset Mailboxes.
- Proposed Walkway Replacement.
- Proposed Pavement Header.
- Remove Existing Storm Sewer Inlet.
- Remove Existing Storm Sewer.
- Contractor Shall Coordinate Support, Adjustment or Relocation of Power/Light Poles and/or Guy Anchors w/Owner of Poles, as Required.
- Adjust Exist. Valve Box, Meter Box or Cleanout to be Flush With Top of Proposed Pvmt or Finished Grade as Noted in Plans. (No Separate Pay)
- San Cementitious Wall Liner.
- Proposed Sewer Rehab by Pipebursting.
- Remove and Replace Driveway with Concrete.
- Remove and Relocate Sign.
- Cut and Plug Sprinkler Head at R.O.W. - No Replacement.
- Remove and Replace existing Yard Drain using 4" PVC Pipe to penetrate through Proposed Curb.
- Adjust MH to Grade and replace with 32" ring and cover.

Wirt Road  
(Contc. PVMT.)



MK.	DESCRIPTION	DATE	DWN.	CHK.



10-28-2024

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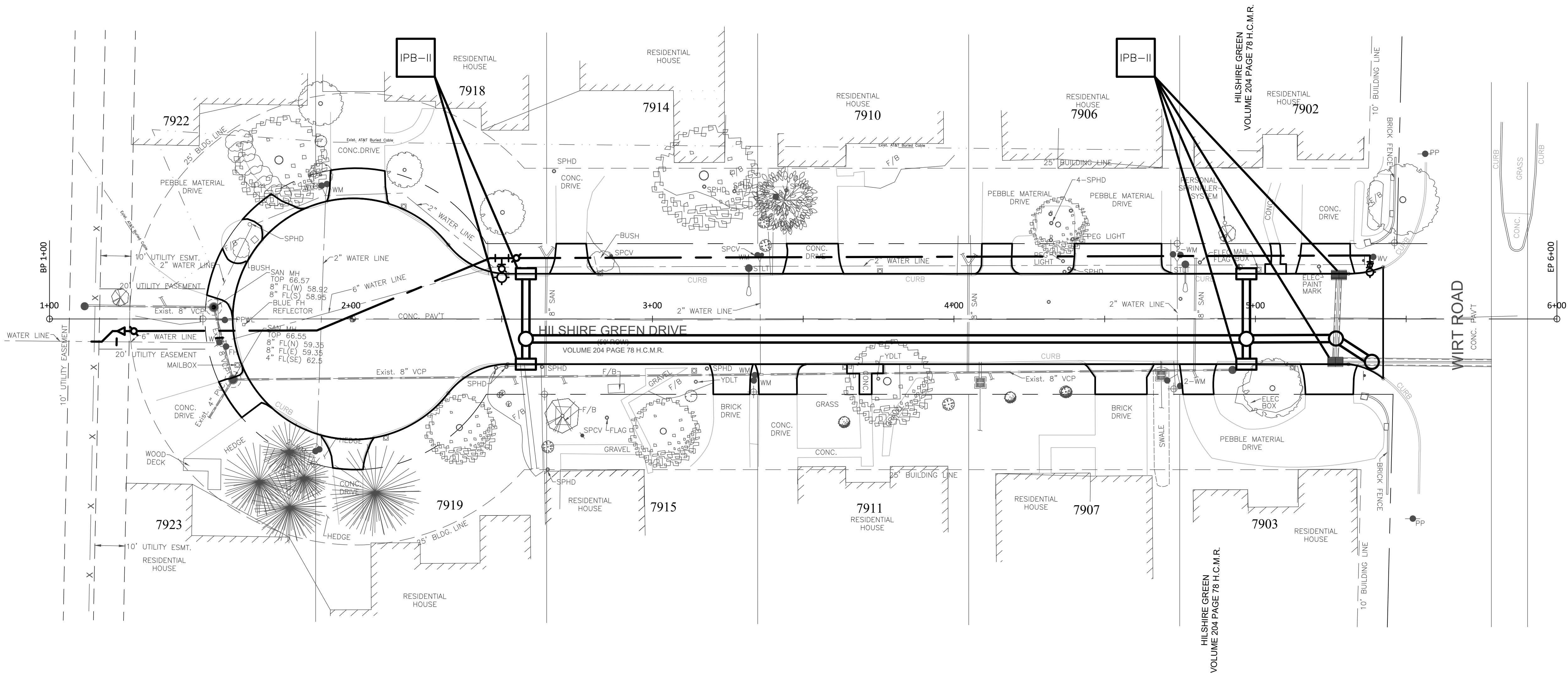
City of Hilshire Village, Texas

Hilshire Green Drive  
Paving, Drainage & Utility Improvements

Hilshire Green Drive  
Sta. 1+00 to End

Job No.: 10408611	Scale: HORZ: 20' VERT: 2' ONE INCH	SHEET 11 OF 23
Date: October, 2024		
Dwn By: G.S. Fuller		
Chkd By: E. Hirm		

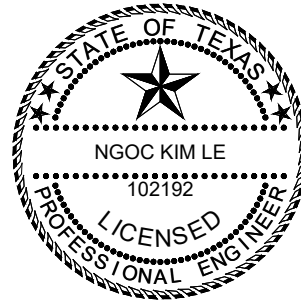




SW3P LEGEND

- 60" EXISTING STORM SEWER
- 60" PROPOSED STORM SEWER
- EXISTING MANHOLE
- EXISTING "BB" INLET
- PROPOSED "BB" INLET
- PROPOSED JUNCTION BOX
- INLET PROTECTION BARRIER FOR EXIST. AND PROP. INLETS
- ROW IN PROJECT AREA

MK.	DESCRIPTION	DATE	DWN.	CHK.



Hye Kim Lee

10-28-2024



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City of Hilshire Village, Texas

Hilshire Green Drive  
Paving, Drainage & Utility Improvements

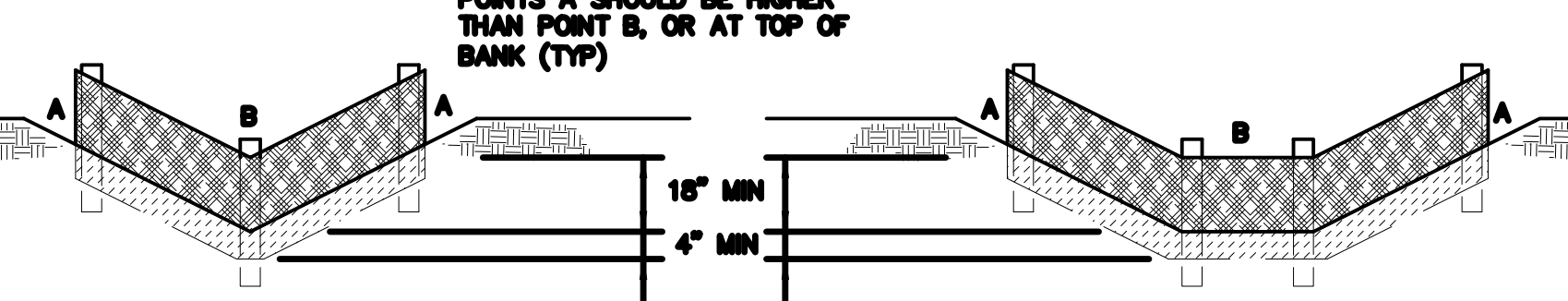
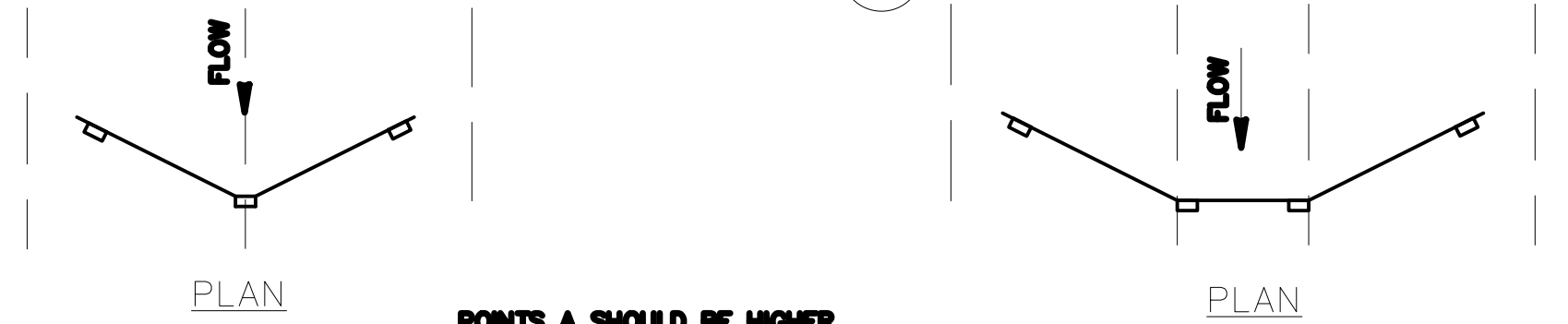
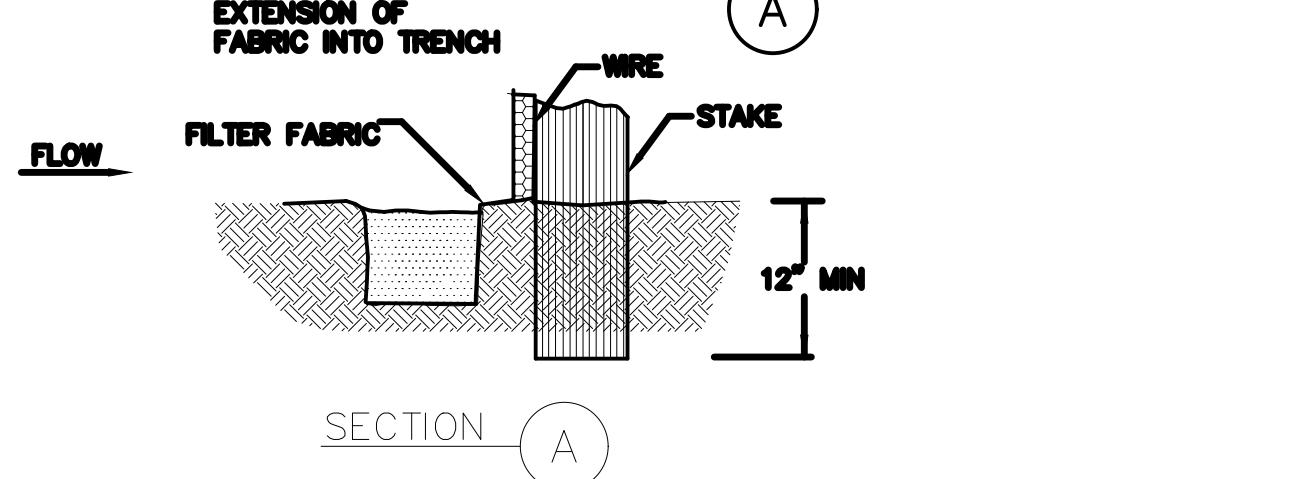
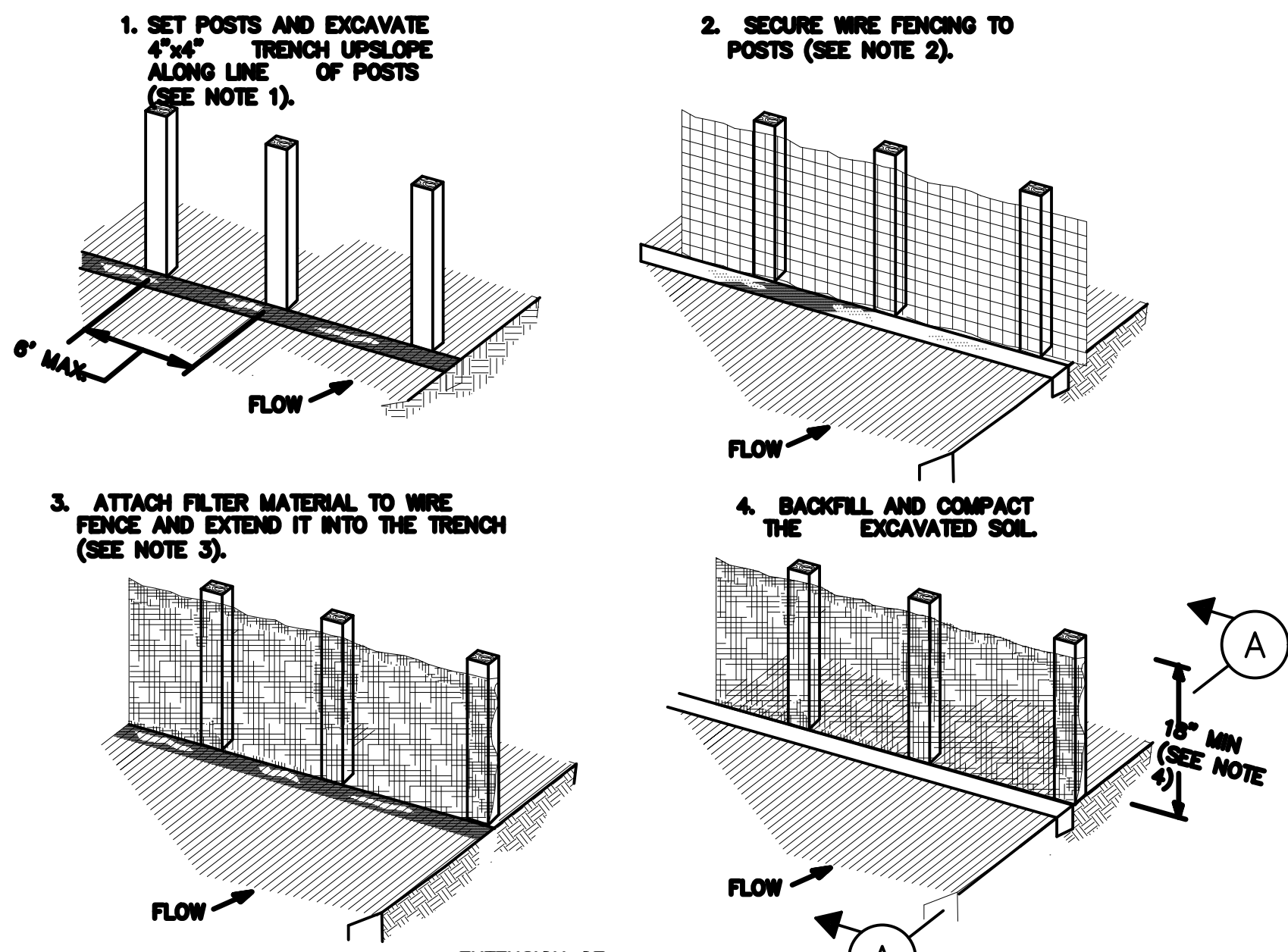
Hilshire Green Drive  
Storm Water Pollution Prevention Plan

Job No.: 10408611  
Date: October, 2024  
Dwn By: G.S. Fuller  
Chkd By: E. Him

Scale:  
HORZ : 20'  
VERT : 2'  
ONE INCH  
IF ABOVE MARK DOES NOT  
MEASURE ONE INCH, THEN  
THIS DWG. NOT TO SCALE

SHEET  
12  
OF 23



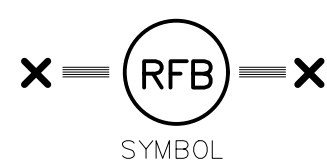


"V-DITCH" SECTION/ELEVATION

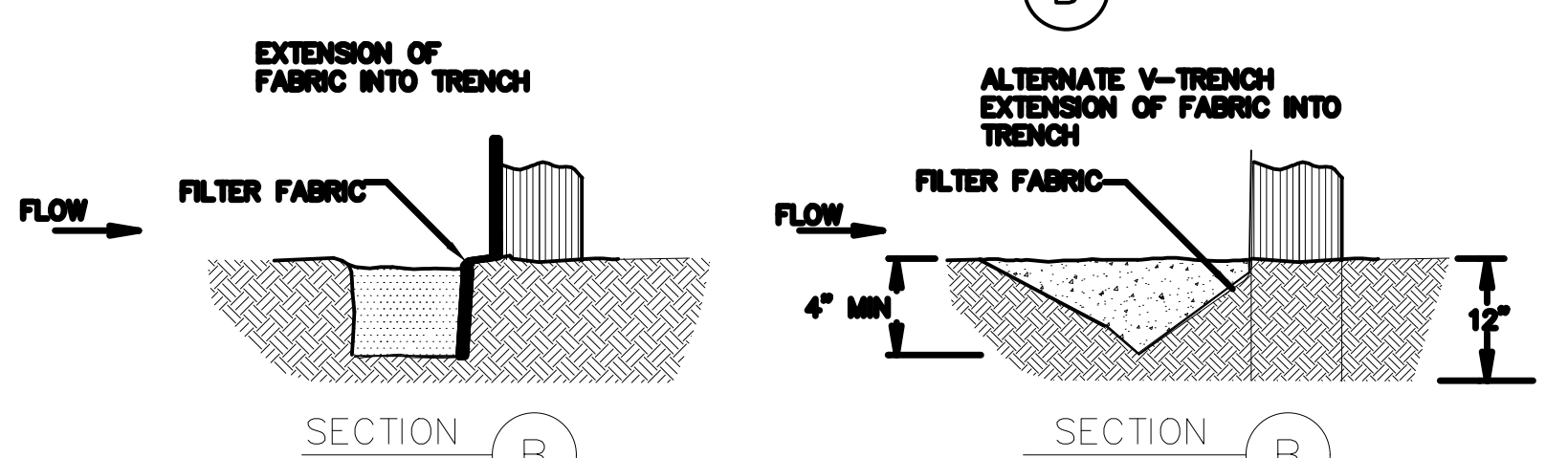
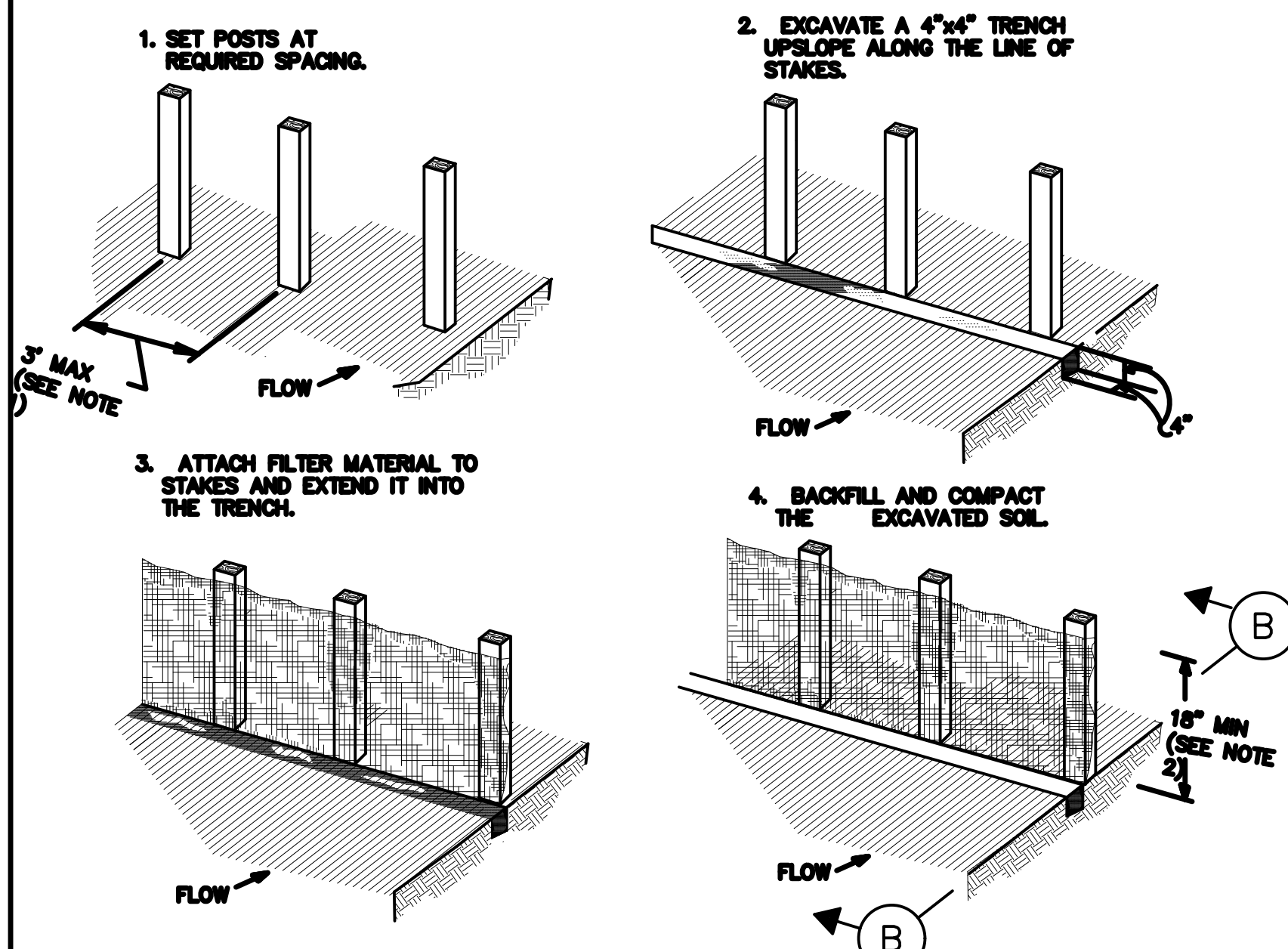
TRAPEZOIDAL SECTION/ELEVATION

#### 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 FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH STAPLES.
3. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE, 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 6 INCHES AT THE POSTS, AND FOLDED.
6. SEE SPECIFICATION FOR FILTER FABRIC BARRIER.



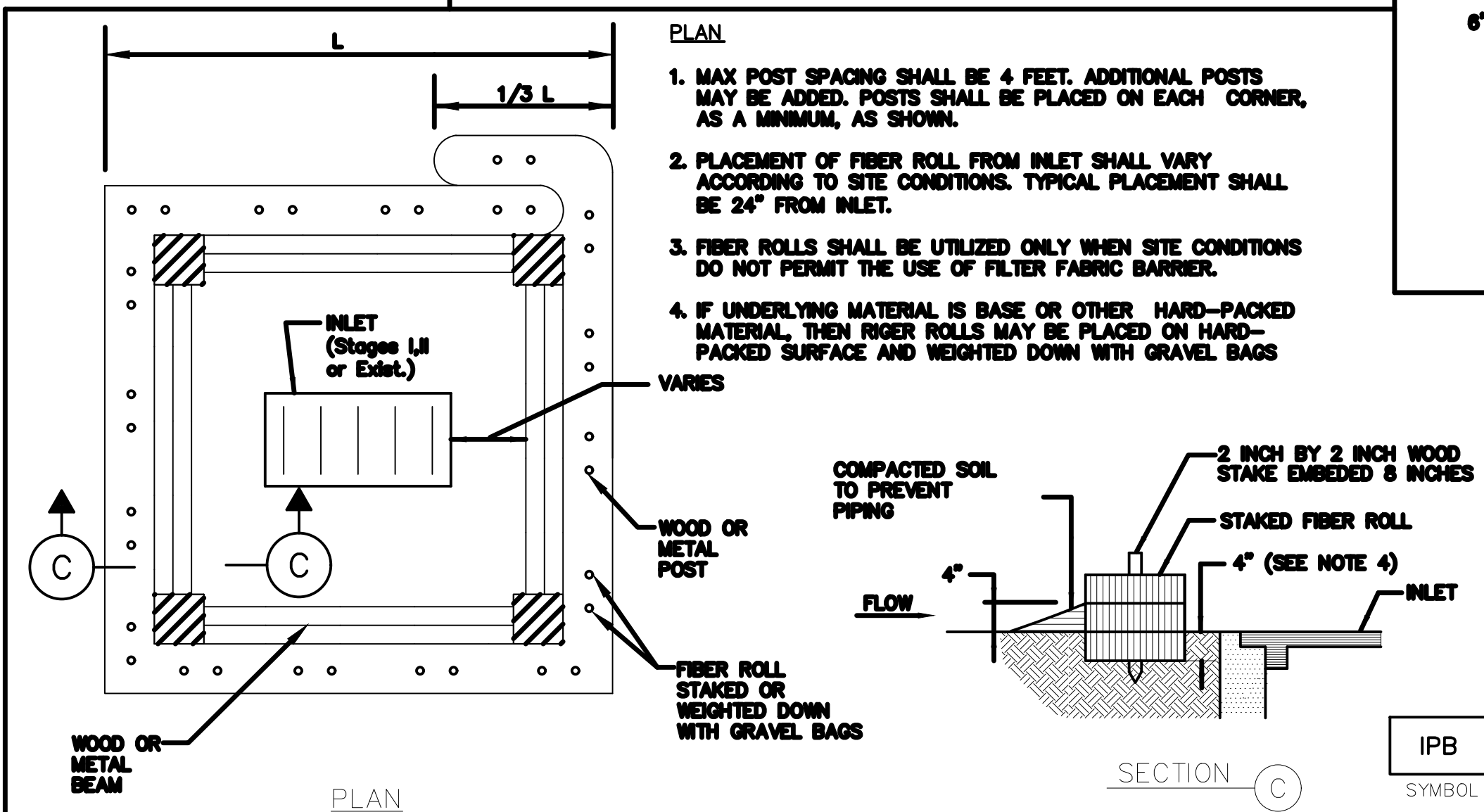
REINFORCED FILTER FABRIC BARRIER



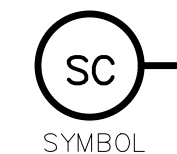
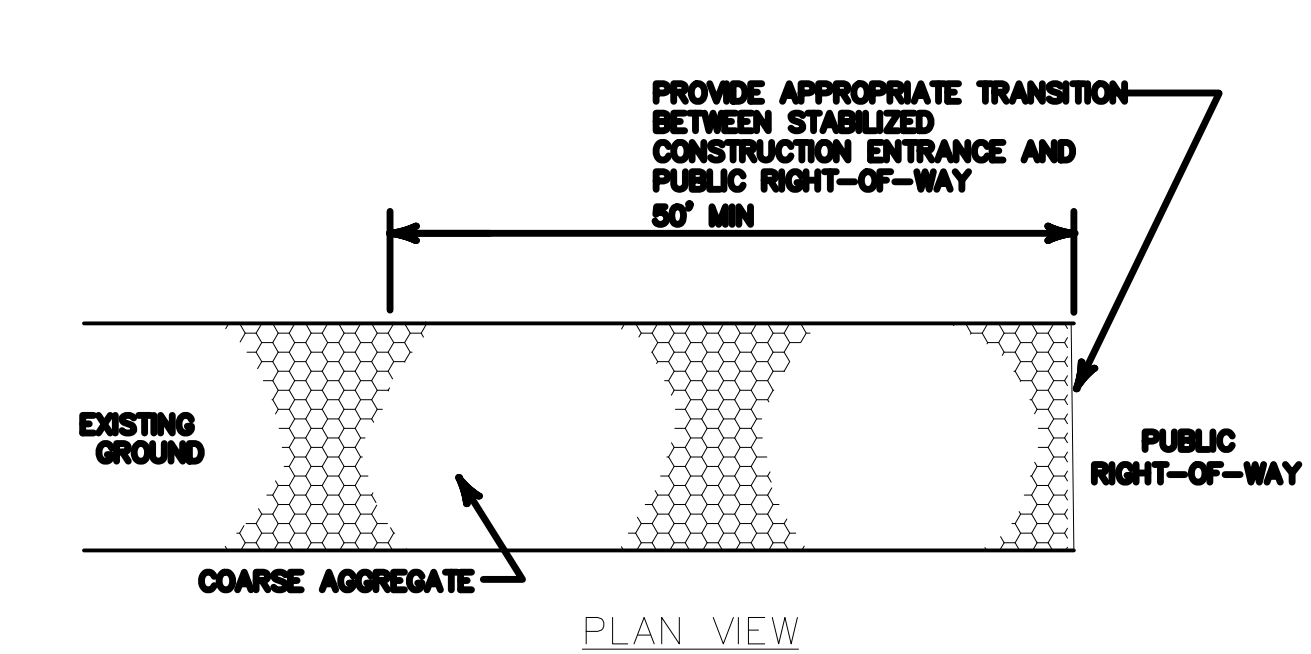
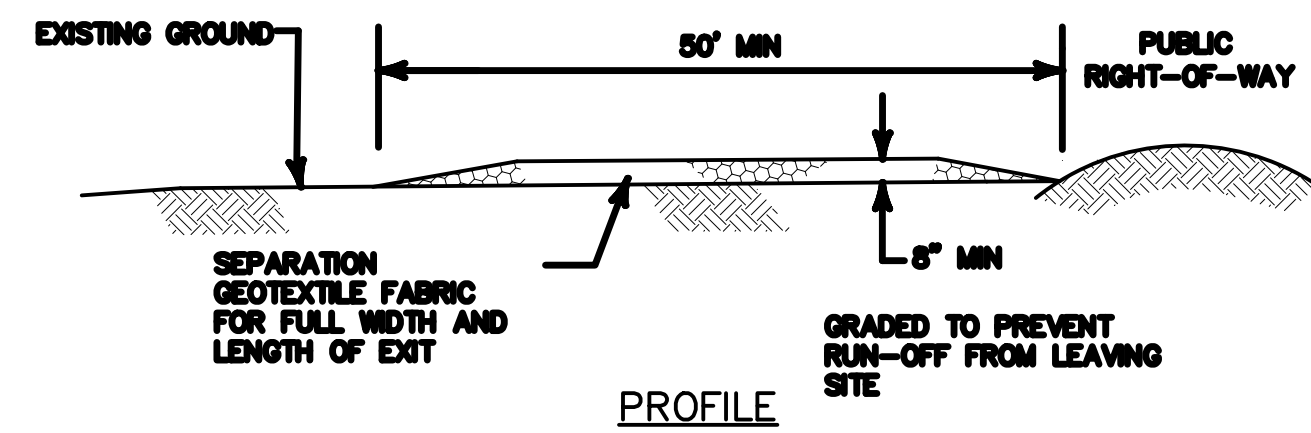
#### CONSTRUCTION NOTES:

1. 2 INCH THICK BY 2 INCH WOODEN STAKES TO BE SET AT MAX SPACING OF 3 FEET AND EMBEDDED A MIN OF 8 INCHES. IF PREASSEMBLED FENCE WITH SUPPORT NETTING IS USED, SPACING OF POST MAY BE INCREASED TO 6 FEET MAX.
2. ATTACH FILTER FABRIC TO WOODEN STAKES. FILTER FABRIC FENCE SHALL HAVE A MIN HEIGHT OF 18 INCHES AND MAX HEIGHT OF 36 INCHES ABOVE NATURAL GROUND.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHOULD BE OVERLAPPED 6 INCHES AT THE POSTS, AND FOLDED.
4. SEE SPECIFICATION FOR FILTER FABRIC FENCE.

FILTER FABRIC FENCE



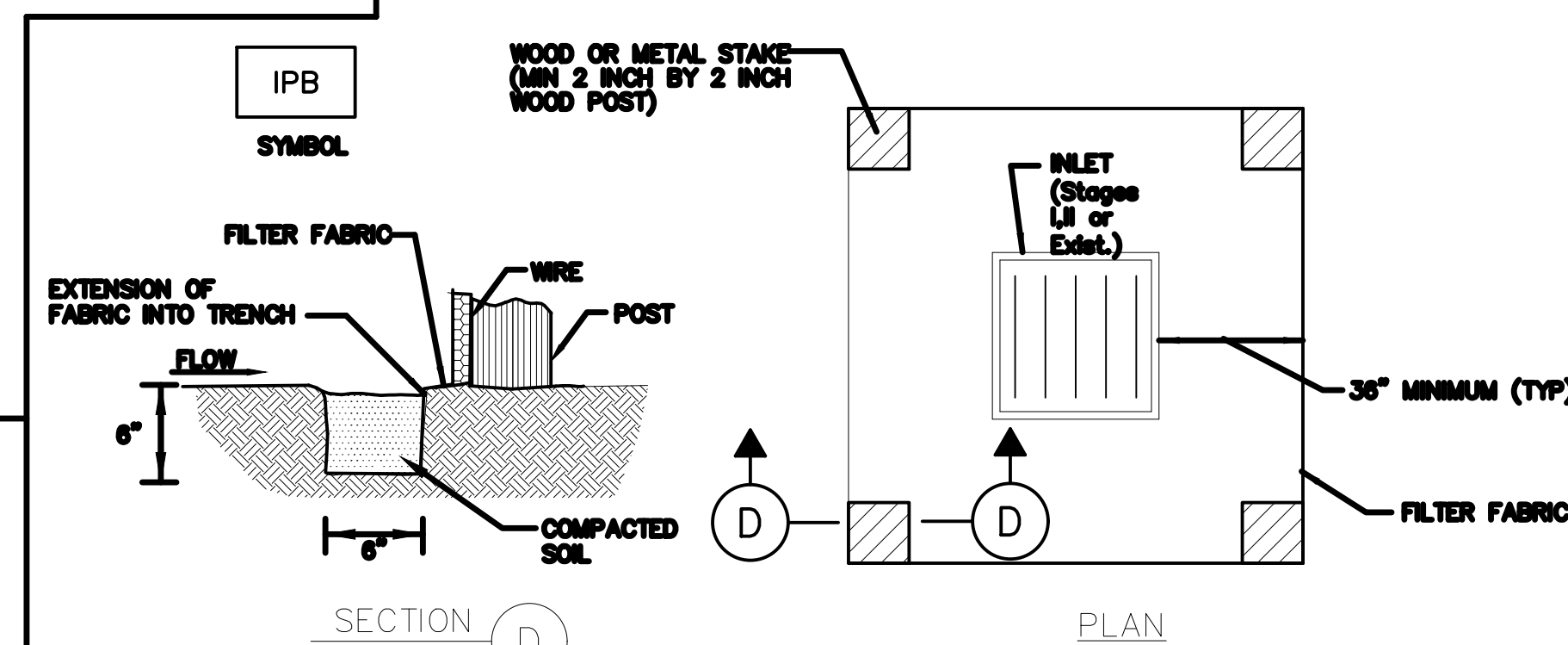
FIBER ROLL INLET PROTECTION BARRIER



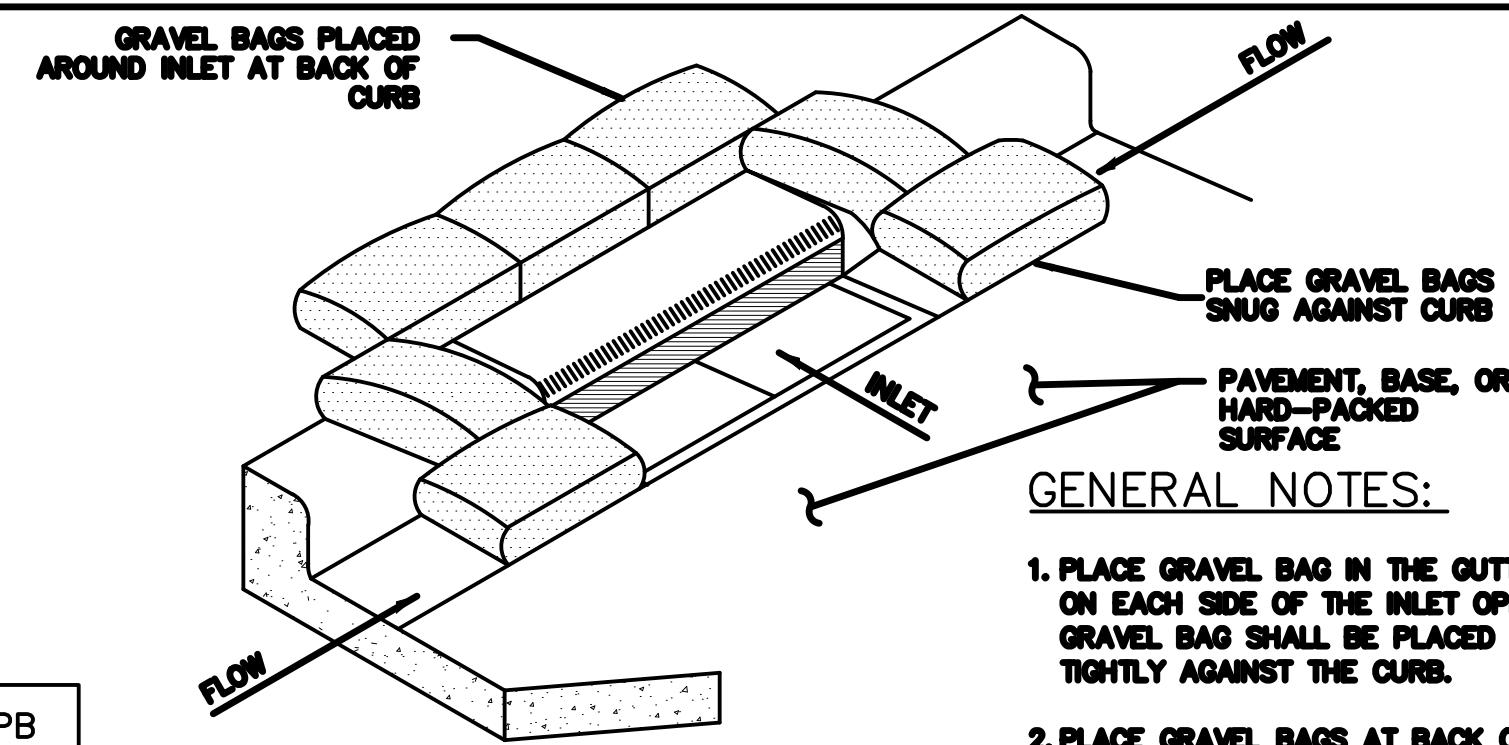
STABILIZED CONSTRUCTION EXIT

#### CONSTRUCTION NOTE:

1. MAX. POST SPACING SHALL BE 4 FEET. ADDITIONAL POSTS MAY BE ADDED. POSTS SHALL BE PLACED ON EACH CORNER, AS A MINIMUM, AS SHOWN.
2. PLACEMENT OF FILTER FABRIC BARRIER FROM INLET SHALL VARY ACCORDING TO SITE CONDITIONS. TYPICAL PLACEMENT SHALL BE 36" MINIMUM FROM INLET EDGE.



SILT FENCE INLET PROTECTION BARRIER



INLET PROTECTION BARRIER  
(FOR EXISTING & PROPOSED STAGE II INLETS)

#### GENERAL NOTES:

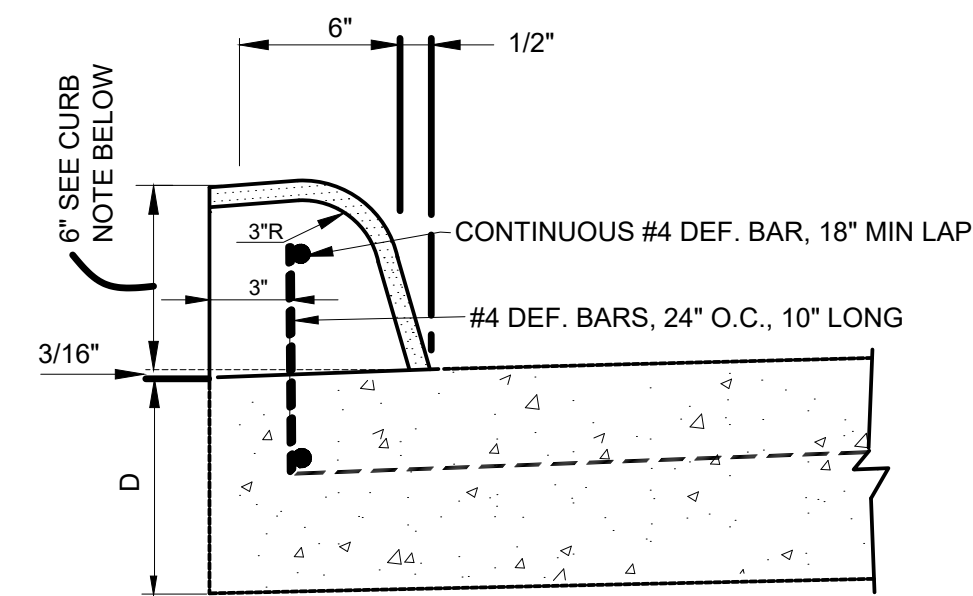
1. PLACE GRAVEL BAG IN THE GUTTER ON EACH SIDE OF THE INLET OPENING. GRAVEL BAG SHALL BE PLACED TIGHTLY AGAINST THE CURB.
2. PLACE GRAVEL BAGS AT BACK OF CURB ALONG INLET.
3. DO NOT PLACE GRAVEL BAGS TO BLOCK THROAT OF INLET, UNLESS DIRECTED BY ENGINEER.

#### 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 EXIT, UNLESS OTHERWISE SHOWN ON THE CONSTRUCTION DRAWINGS.
5. STABILIZED AREA MAY BE WIDENED OR LENGTHENED TO ACCOMMODATE A TRUCK WASHING AREA. AN OUTLET SEDIMENT TRAP MUST BE PROVIDED FOR THE TRUCK WASHING AREA.
6. SEE SPECIFICATION FOR STABILIZED CONSTRUCTION EXIT.
7. STABILIZED CONSTRUCTION EXIT SHALL BE MAINTAINED FREE OF SEDIMENT FOR THE DURATION OF THE PROJECT.

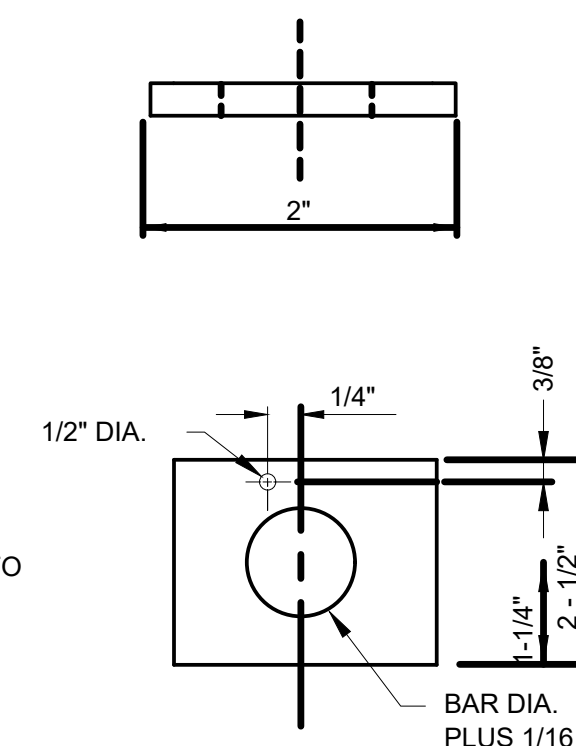
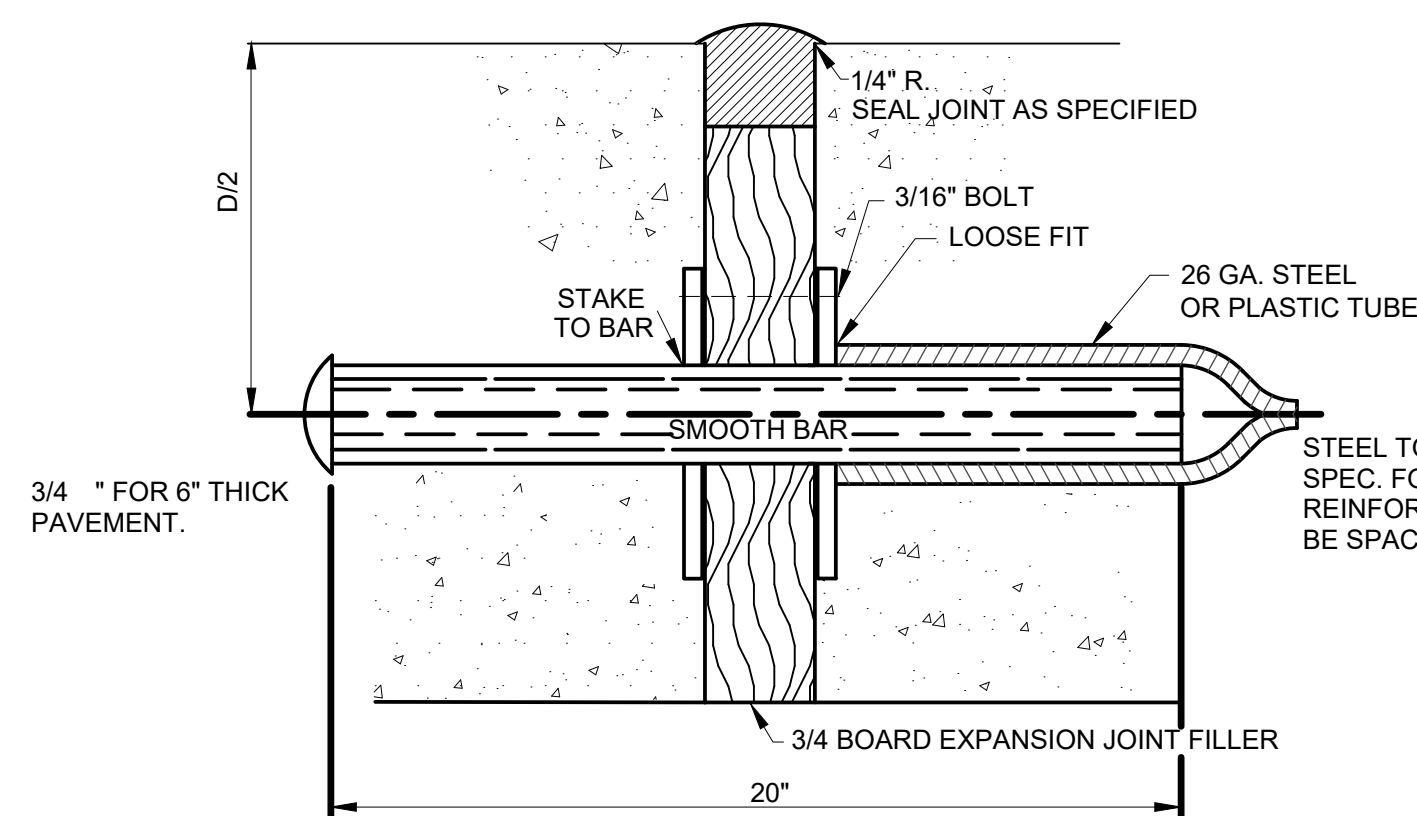
Job No.: 10408611	Scale: HORIZ: NA VERT: ONE INCH	SHEET 13
Date: October, 2024	IF ABOVE MARK DOES NOT MEASURE ONE INCH, THEN THIS DWG. NOT TO SCALE	OF 23
Dwn By: G.S. Fuller	Chkd By: E. Him	
City of Hilshire Village, Texas		
Hilshire Green Drive Paving, Drainage & Utility Improvements		
Storm Water Pollution Prevention Details I		
HDR Engineering Inc. Texas Reg. No. 754 4828 Loop Central Drive, Suite 700 • Houston, Texas 77081 (713) 622-9264 • Fax (713) 622-9265 • www.hdrinc.com		
Professional Engineer 102192 10-28-2024		





### CONCRETE CURB




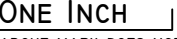
1. ALL REINFORCING STEEL SHALL CONFORM TO A.S.T.M. SPEC. NO. A-15-54T, AND A-305-53T
2. THE SPACING OF EXPANSION JOINTS SHALL BE 60' MAX.
3. THE LOCATION OF CONSTRUCTION JOINTS MAY BE VARIED, WITH THE APPROVAL OF THE CITY'S REPRESENTATIVE, TO SUIT THE PROPOSED CONSTRUCTION METHODS OF THE CONTRACTOR. MAXIMUM WIDTH BETWEEN LONGITUDINAL JOINTS SHALL NOT EXCEED 20'-0".



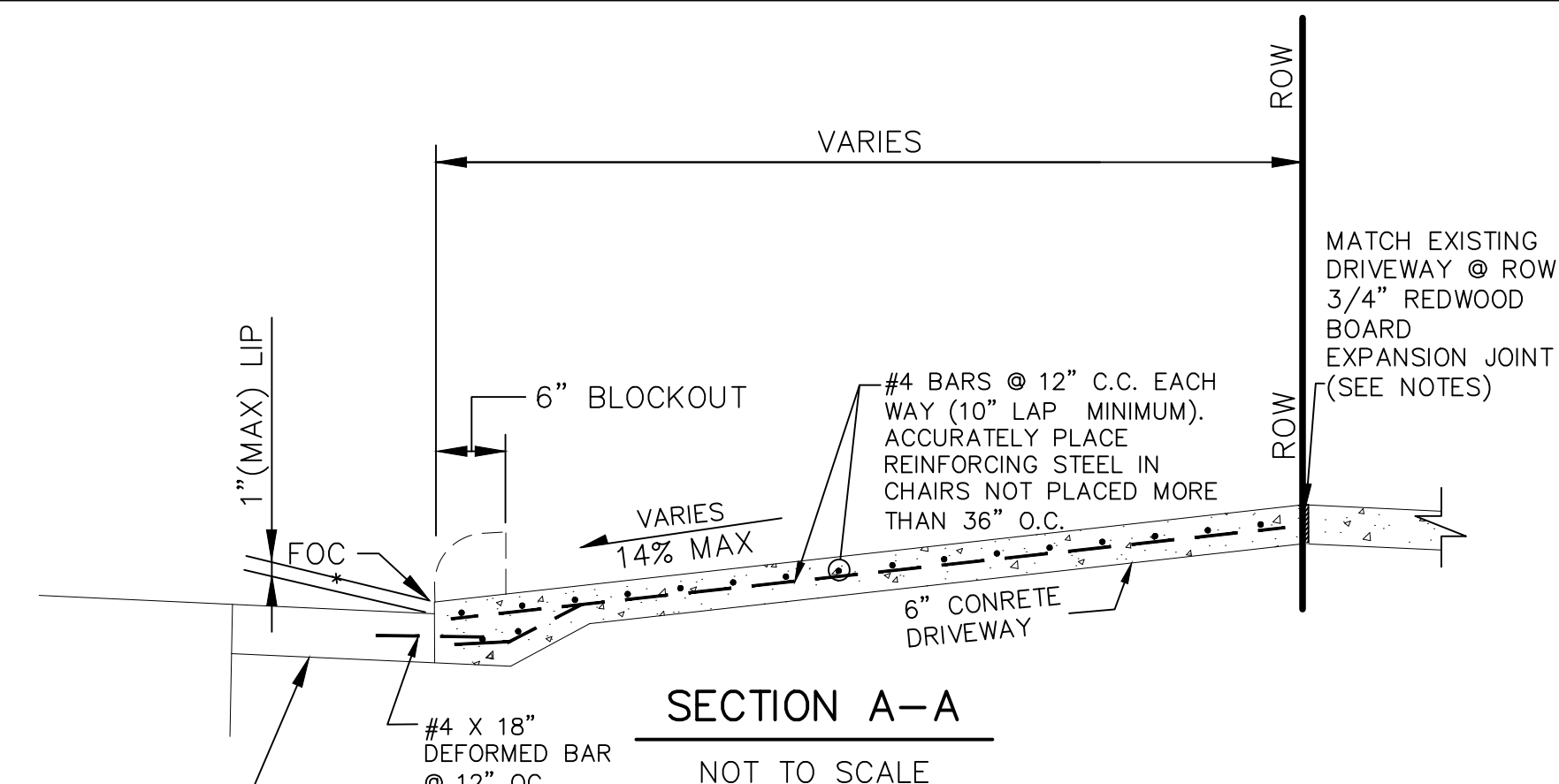
### DOWEL TYPE EXPANSION JOINT

Diagram illustrating the construction of a concrete joint. The diagram shows a cross-section of a concrete slab with a central joint. Reinforcement bars (labeled "USE #4 BARS - 36" LONG ON 18" C-C TO TIE PAVEMENT REINFORCEMENT ACROSS JOINT") are shown extending across the joint. A metal strip (labeled "KEYED JOINT (METAL STRIP) TO BE REMOVED PRIOR TO SECOND CONCRETE PLACEMENT") is embedded in the concrete at the joint. A joint seal (labeled "1/2\" JOINT SEAL") is applied to the joint. The concrete is shown with aggregate and a rebar labeled "1/4\"R".

### TYPE I PAVING HEADER DETAIL

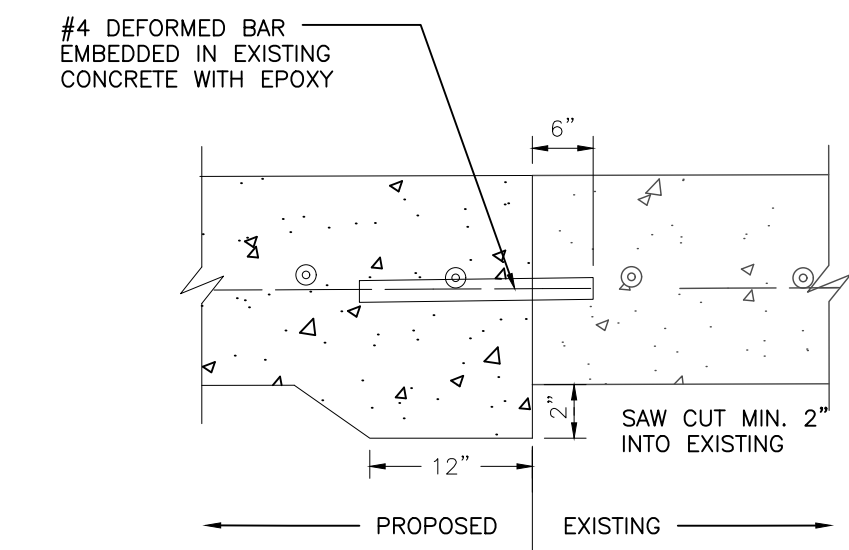
MK.	DESCRIPTION			DATE	DWN.	CHK.			
<div style="text-align: center;"> <i>Ngoc Kim Le</i> 10-28-2024</div> <div style="text-align: center;"> HDR Engineering Inc. Texas Reg. No. 754 4828 Loop Central Drive, Suite 700 • Houston, Texas 77081 (713) 622-9264 • Fax (713) 622-9265 • www.hdrinc.com</div> <div style="text-align: center;">City of Hilshire Village, Texas</div> <div style="text-align: center;">Hilshire Green Drive Paving, Drainage &amp; Utility Improvements</div> <div style="text-align: center;">Paving Details 1</div>									
Job No.: 10408611				Scale:				SHEET	
Date: October, 2024				HORIZ :				14	
Dwn By: G.S. Fuller				VERT :					
Chkd By: E. Him				IF ABOVE MARK DOES NOT MEASURE ONE INCH, THEN THIS DWG. NOT TO SCALE					
								OF 23	





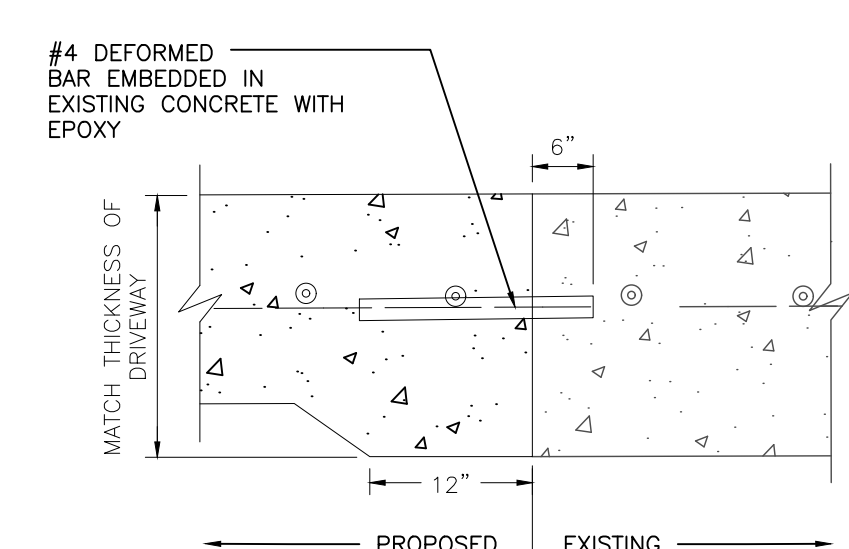
1. DRIVEWAYS SHALL BE CONSTRUCTED TO MATCH EXISTING DRIVEWAY WIDTH MEASURED AT THE RIGHT-OF-WAY. WHEN DRIVEWAY EXCEEDS 20'-0" IN WIDTH, OR WHEN EXISTING DRIVEWAY JOINT OR PROPOSED PAVING JOINT FALLS WITHIN LIMIT OF DRIVEWAY, A 3/4" REDWOOD BOARD EXPANSION JOINT W/STEEL RUNNING THROUGH IT, OR APPROVED EQUAL SHALL BE INSTALLED THE FULL LENGTH OF THE DRIVEWAY.
2. RESIDENTIAL DRIVEWAYS SHALL BE CONSTRUCTED OF CONCRETE 6" THICK.
3. SELECT BACKFILL SHALL BE USED AS A BASE LEVELER AND/OR AS BACKFILL REQUIRED WHEN OVER EXCAVATION OCCURS DUE TO POOR SOILS OR ANY OTHER CONDITION RESULTING IN OVER EXCAVATION OF DRIVEWAYS. SELECT BACKFILL SHALL BE COMPACTED TO 95% STANDARD PROCTOR DENSITY.
4. WHERE TYING INTO EXISTING CONCRETE DRIVEWAY AND CONDITION OF EXISTING DRIVEWAY ALLOWS, PROVIDE 3/4" REDWOOD BOARD W/24" LONG #4 DEFORMED BARS @ 18" O.C. THROUGH IT DRILLED INTO EXISTING DRIVEWAY. WHERE EXISTING CONCRETE IS IN POOR CONDITION OR WHERE DRIVEWAY IS ASPHALT, SHELLCRETE, SHELL, GRAVEL, DIRT, OR GRASS, PROVIDE STANDARD PAVING HEADER AT NO ADDITIONAL COST.
5. THE PROPOSED LIMITS OF REPLACEMENT OF DRIVEWAYS SHOWN ON THE PLAND AND PROFILES ARE APPROXIMATE. CONTRACTOR TO VERIFY THAT BASED ON THESE LIMITS, THE SLOPE IS NOT GREATER THAN 14%. CONTRACTOR SHALL COORDINATE WITH THE CITY'S REPRESENTATIVE AND PROPERTY OWNER TO REMOVE AND REPLACE DRIVEWAY BEYOND ROW AS REQUIRED TO ACHIEVE DRIVEWAY GRADE EQUAL TO OR LESS THAN 14%. REMOVAL/REPLACEMENT OF DRIVEWAYS TO RIGHT-OF-WAY VS NEAREST JOINT BEYOND ROW SHALL BE A FIELD DECISION. CITY REQUIRES CLEAN JOINT AT ROW IN ANY CASE. IF DECISION IS MADE TO EXTEND DRIVEWAY REPLACEMENT TO AN EXISTING EXPANSION JOINT BEYOND THE ROW, PROVISION OF A CONTRACTION JOINT AT THE ROW IS REQUIRED.

NOT TO SCALE

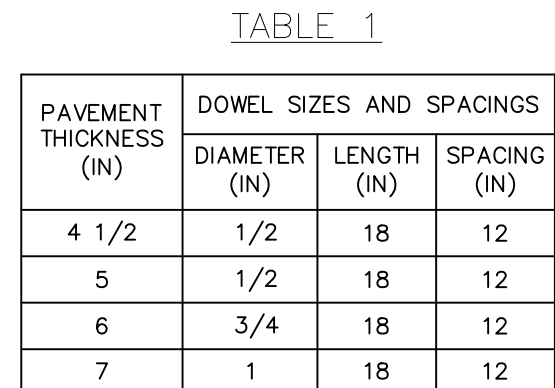


\* RECONSTRUCTION OF DRIVEWAYS SHALL BE EXTENDED BEYOND THE RIGHT OF WAY TO A POINT 10 FEET MAX OR TO ACCOMMODATE A 14% SLOPE, WHICH EVER OCCURS FIRST.

\*\* USUAL, SEE P&P FOR VARIATIONS



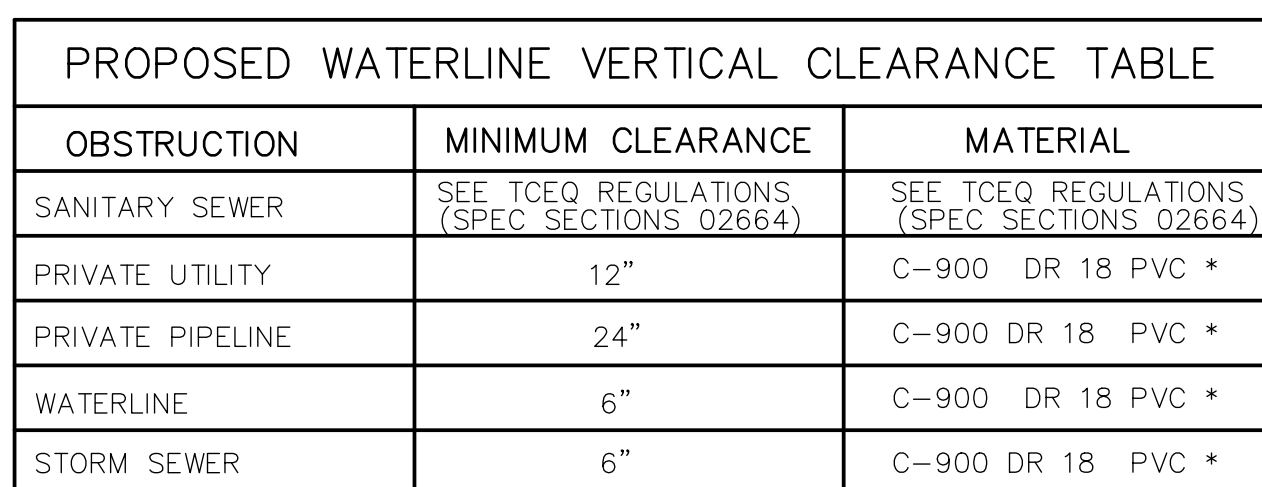
SECTION  
SIDEWALK TO EXISTING DRIVEWAY



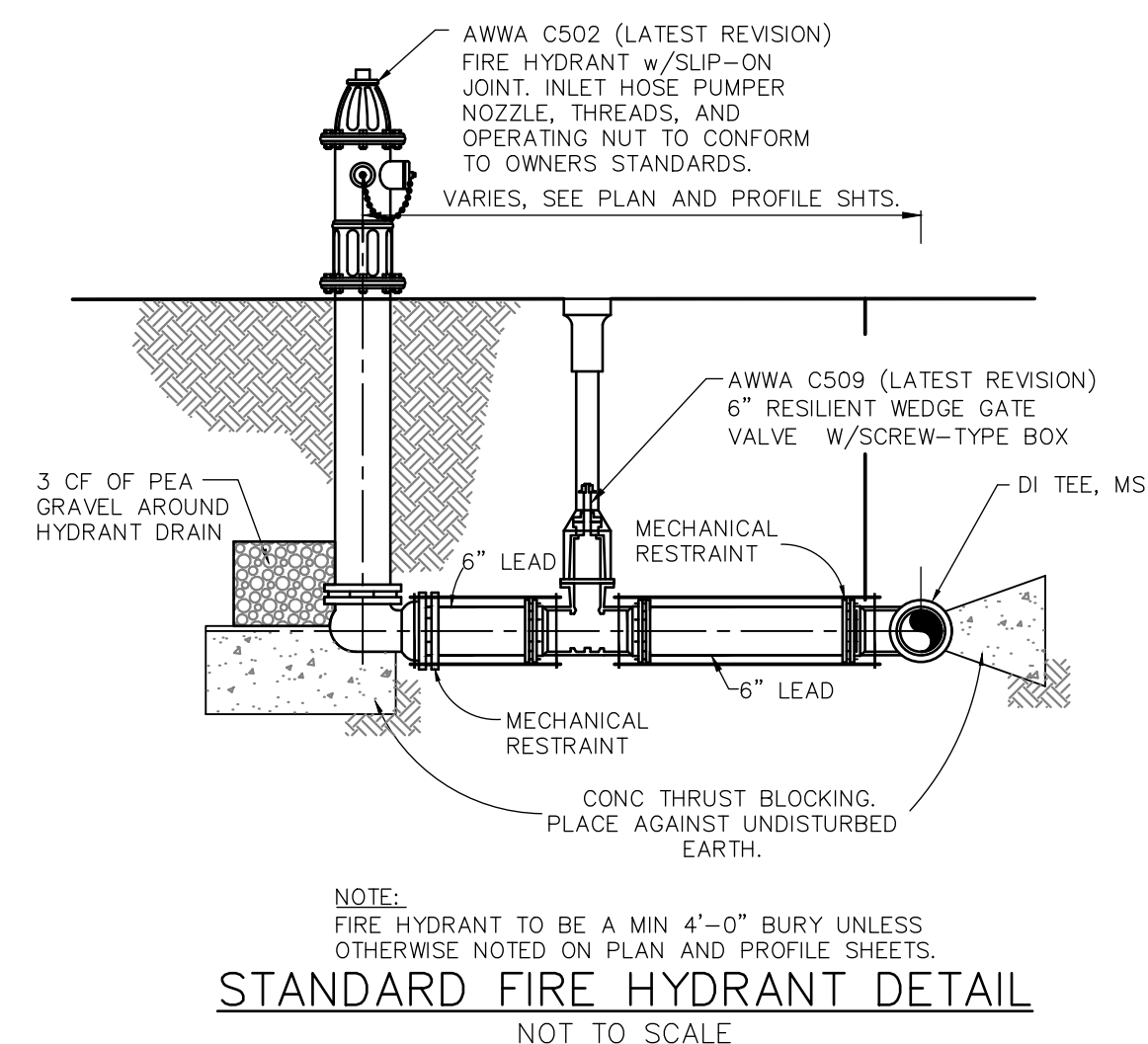
NOT TO SCALE

MK.	DESCRIPTION		DATE	DWN.	CHK.				
									
<i>Ngoc Kim Le</i>									
10-28-2024									
 <p>HDR Engineering Inc. Texas Reg. No. 754          4828 Loop Central Drive, Suite 700 • Houston, Texas 77081          (713) 622-9264 • Fax (713) 622-9265 • www.hdrinc.com</p>									
City of Hilshire Village, Texas									
Hilshire Green Drive Paving, Drainage & Utility Improvements									
Paving Details II									
Job No.: 10408611			Scale:			<div style="font-size: 2em; font-weight: bold;">NA</div> <div style="font-size: 2em; font-weight: bold;">MA</div> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: auto;">ONE INCH</div> <small>IF ABOVE MARK DOES NOT MEASURE ONE INCH, THEN THIS DWG. NOT TO SCALE</small>		SHEET	
Date: October, 2024			HORZ VERT					15	
Dwn By: G.S. Fuller									
Chkd By: E. Him								OF 23	



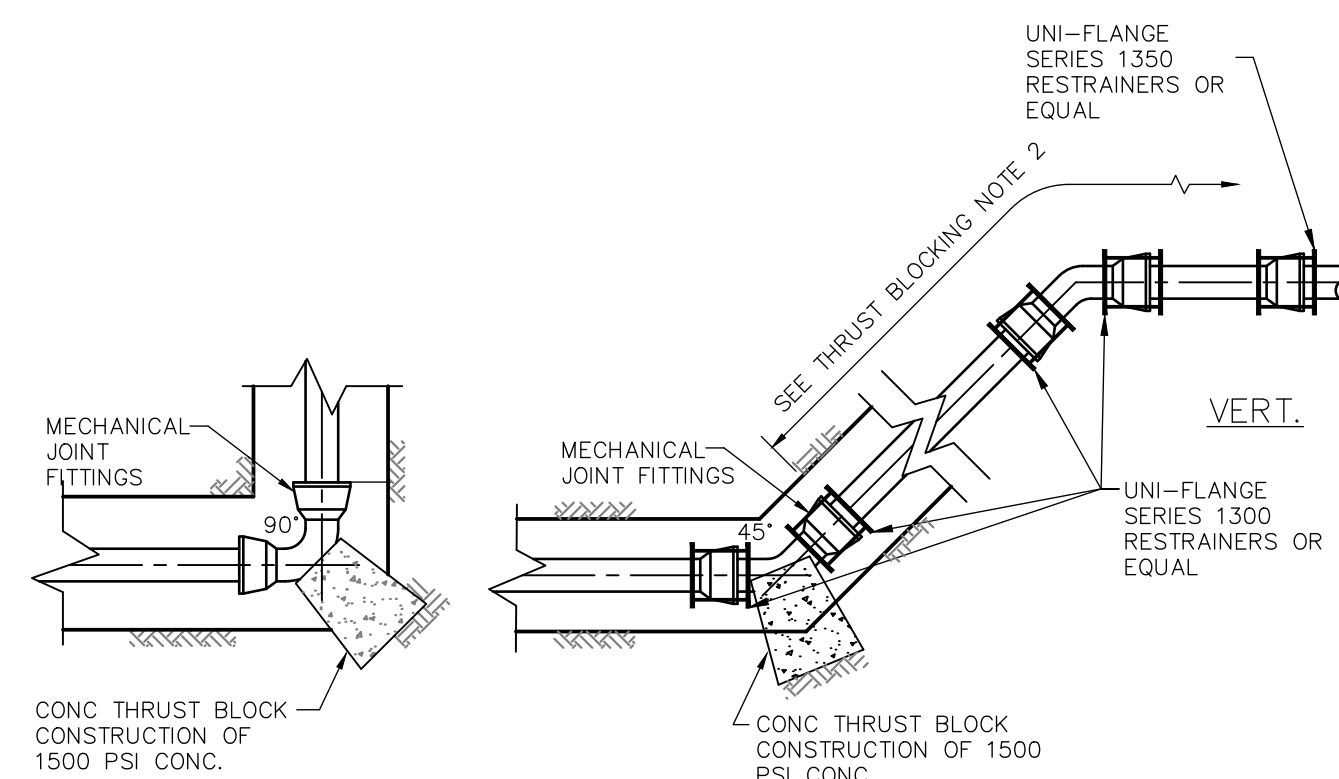


\* IF DEPTH OF WATERLINE IS GREATER THAN 8' OR COVER IS LESS THAN 3' MATERIAL SHALL BE C-900 DR 14 PVC.



- FIRE HYDRANT NOTES

1. ALL FIRE HYDRANTS SHALL CONFORM TO THE CITY'S FIRE DEPARTMENT REQUIREMENTS.
2. ALL FIRE HYDRANTS SHALL BE LOCATED 3' BACK OF CURB FOR CURB AND GUTTER STREETS AND 3' INSIDE RIGHT-OF-WAY (2' ABSOLUTE MIN) FOR ROADSIDE DITCH STREETS.
3. FIRE HYDRANTS SHOWN AT INTERSECTIONS SHALL BE LOCATED AT THE CURB RETURN FOR CURB AND GUTTER STREETS AND AT THE PROPERTY CORNER FOR ROADSIDE DITCH STREETS UNLESS OTHERWISE SHOWN ON PLANS AND APPROVED BY OWNER.
4. ALL FIRE HYDRANTS SHALL HAVE A MINIMUM OF 5'-0" LEAD PIPE. LEAD PIPES SHALL NOT EXCEED 100' IN LENGTH AND SHALL HAVE NO VERTICAL OR HORIZONTAL BENDS.
5. EACH FIRE HYDRANT LEAD SHALL HAVE A VALVE, PER SPECIFICATIONS, BEING EITHER A GATE VALVE WITH A TEE CONNECTION TO THE MAIN OR A TAPPING SLEEVE AND VALVE CONNECTION TO THE MAIN.
6. VALVES SHALL NOT BE LOCATED AT THE FLOWLINE OF ANY DITCH.
7. NEW FIRE HYDRANTS REPLACING THOSE TO BE SALVAGED SHALL BE PLACED 2'± EITHER SIDE OF THE EXISTING.
8. FIRE HYDRANTS SHALL BE PLACED AS SHOWN ON PLANS
9. FIRE HYDRANTS LOCATED IN AREAS OTHER THAN INTERSECTIONS SHALL BE LOCATED AT SIDE OF LOT LINES, UNLESS SHOWN OTHERWISE ON PLANS AND APPROVED BY OWNER.
10. NEW FIRE HYDRANTS SHALL BE LOCATED IN ALL AREAS WHERE EXISTING FIRE HYDRANTS ARE TO BE SALVAGED.
11. IN THE EVENT THAT A PROPOSED FIRE HYDRANT CANNOT BE LOCATED IN AREA DESCRIBED AS TYPICAL, ULTIMATE LOCATION OF FIRE HYDRANTS SHALL BE AS DETERMINED BY OWNER.
12. ALL FIRE HYDRANTS SHALL BE INSTALLED WITH 5" STORZ ADAPTERS WITH CAP.
13. STORZ ADAPTERS SHALL BE AS MANUFACTURED BY HARRINGTON PH450-40NH/CAP STORZ PERMANENT HYDRANT ADAPTER WITH CAP (HYDRANT CONVERTER) OR FRYLANCE ADPT-5.0ST-BC 5" STORZ BLIND CAP (ALUMINUM).
14. NO PART OF THE STORZ ADAPTERS SHOULD BE PAINTED. ALL PARTS ARE DESIGNED TO PROVIDE UNION WITHOUT PAINT. THIS INCLUDES SOME WITH THE CONNECTING CABLE THAT HAS BUILT-IN REFLECTORS FOR BETTER RECOGNITION AT NIGHT.



HORIZ/ VERT

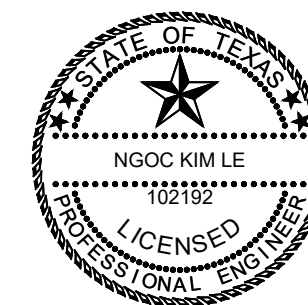
HORIZ/ VERT

THRUST BLOCKING NOTES:

1. SIZE OF THRUST BLOCK TO BE ADEQUATE FOR TWO TIMES, TEST PRESSURE; THAT IS 250 PSI NO SEPARATE PAY FOR THRUST BLOCKING.
2. RESTRAINED JOINT PIPING SHALL BE USED IN ALL AREAS WHERE HORIZONTAL NEW PIPE HAS LESS THAN 4' COVER. ALL VERTICAL BENDS SHALL HAVE RESTRAINED JOINTS.

JOINT RESTRAINT DETAILS  
NOT TO SCALE

MK.	DESCRIPTION	DATE	DWN.	CHK.



Ngoc Kim h

10-28-2024

HR

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City of Hilshire Village, Texas

Hilshire Green Drive  
Paving, Drainage & Utility Improvements

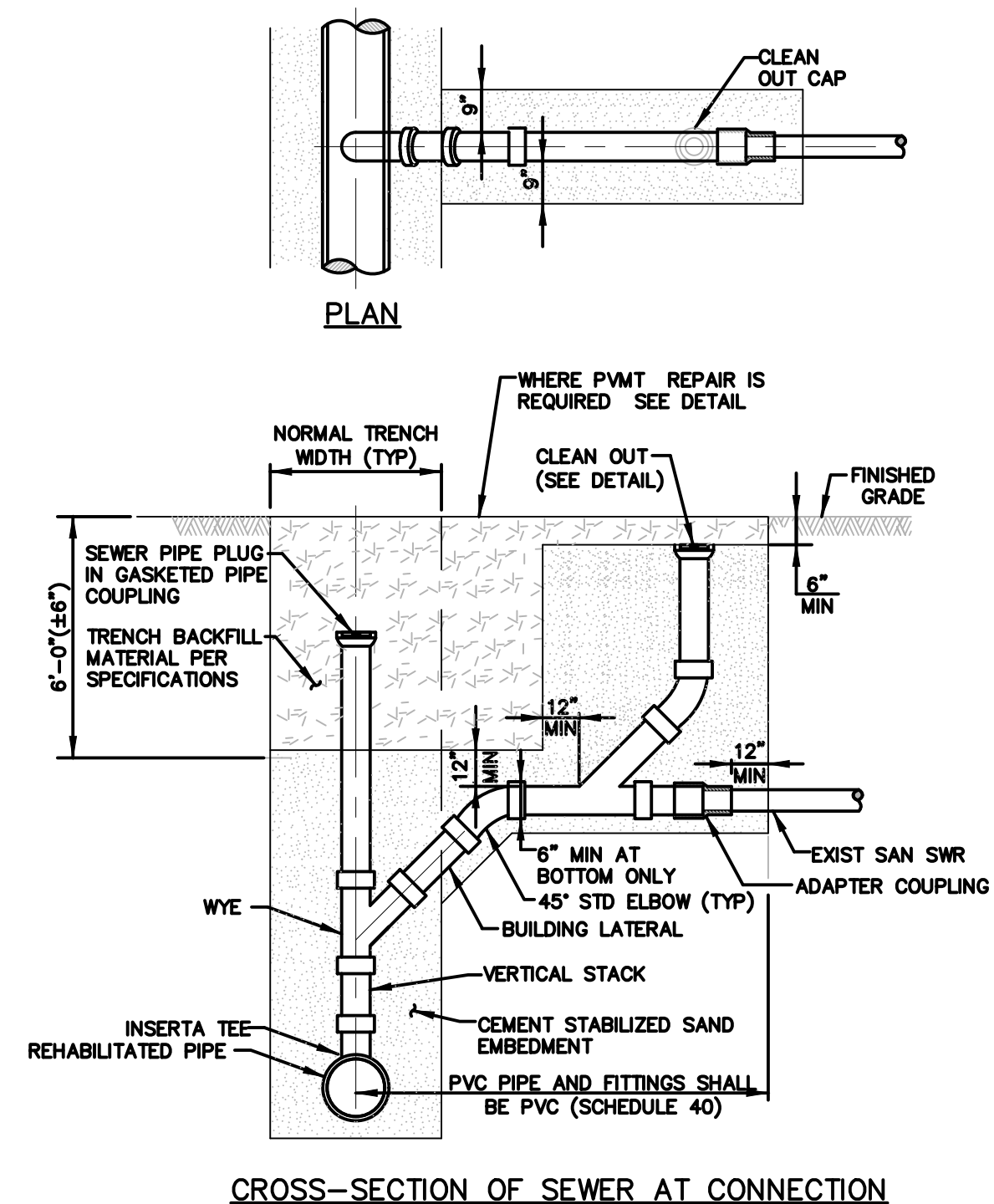
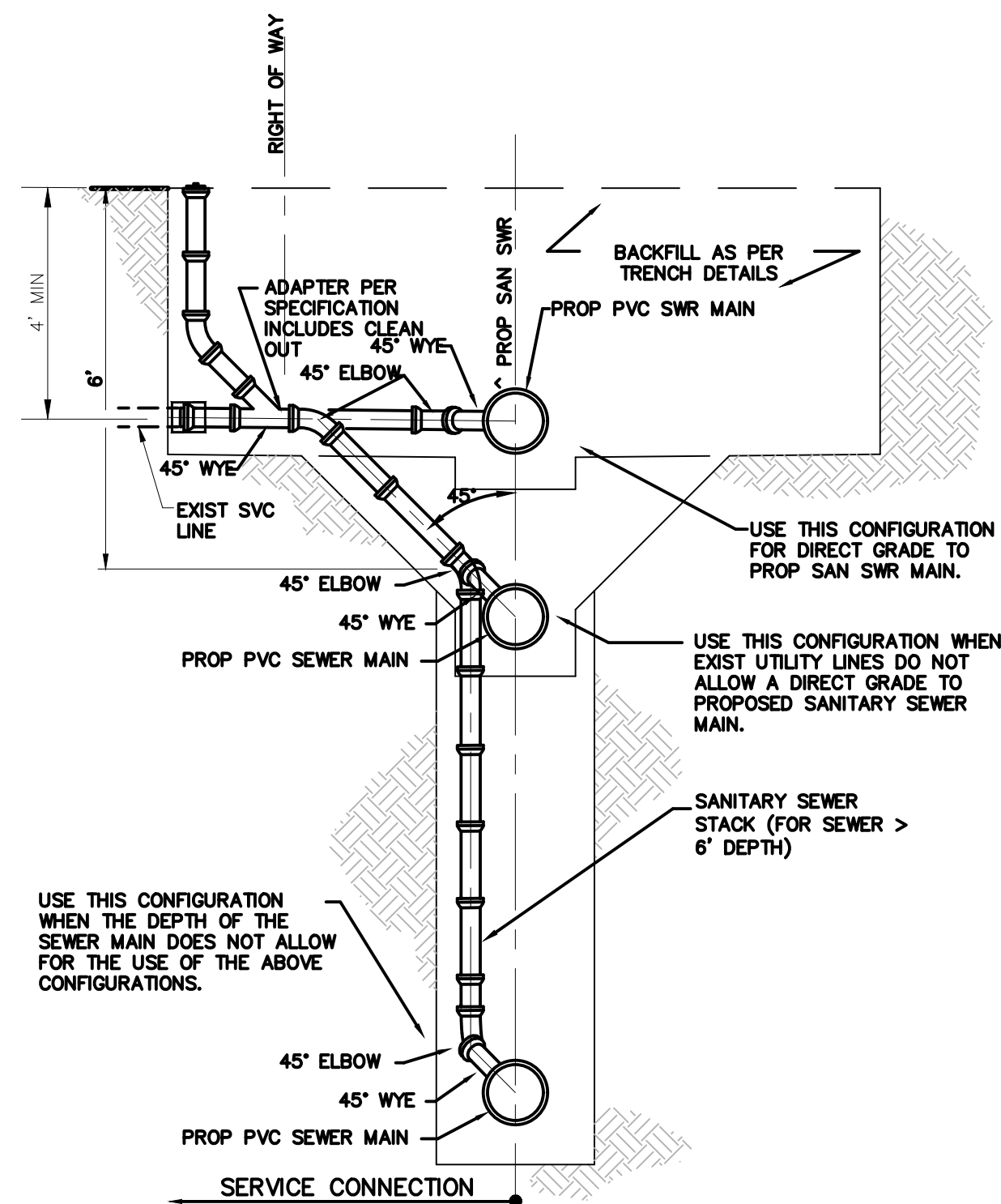
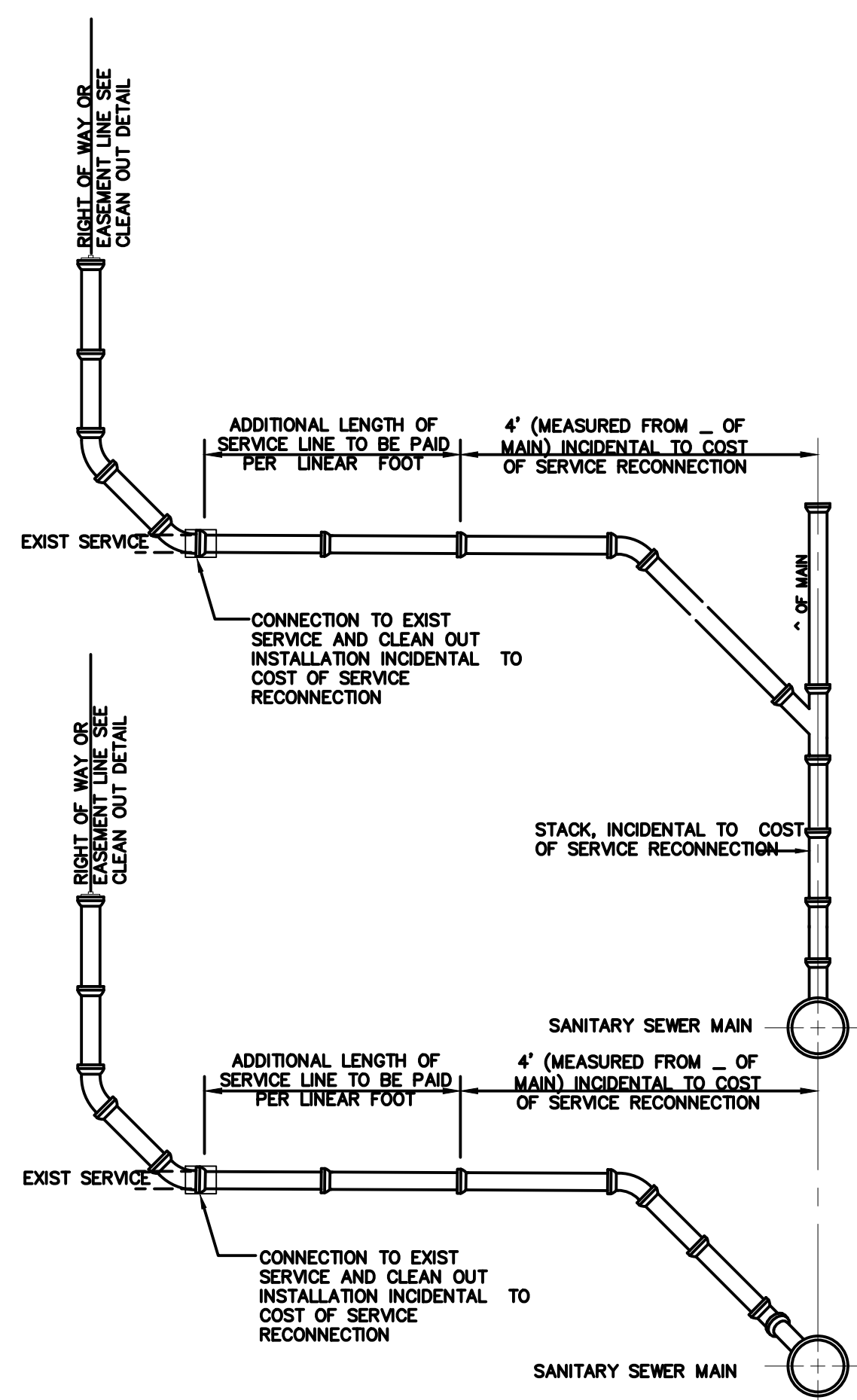
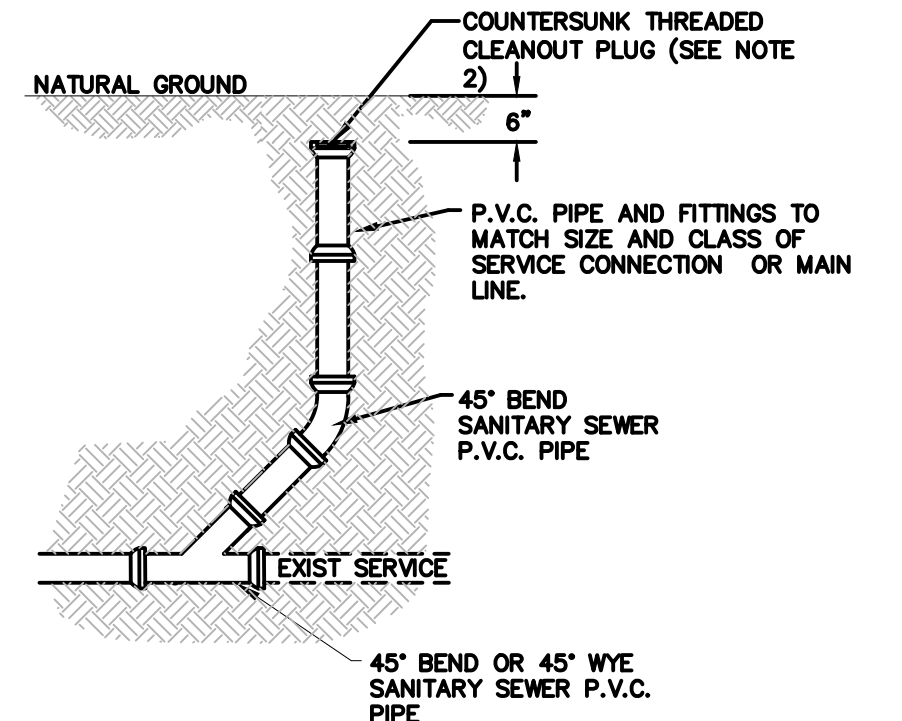
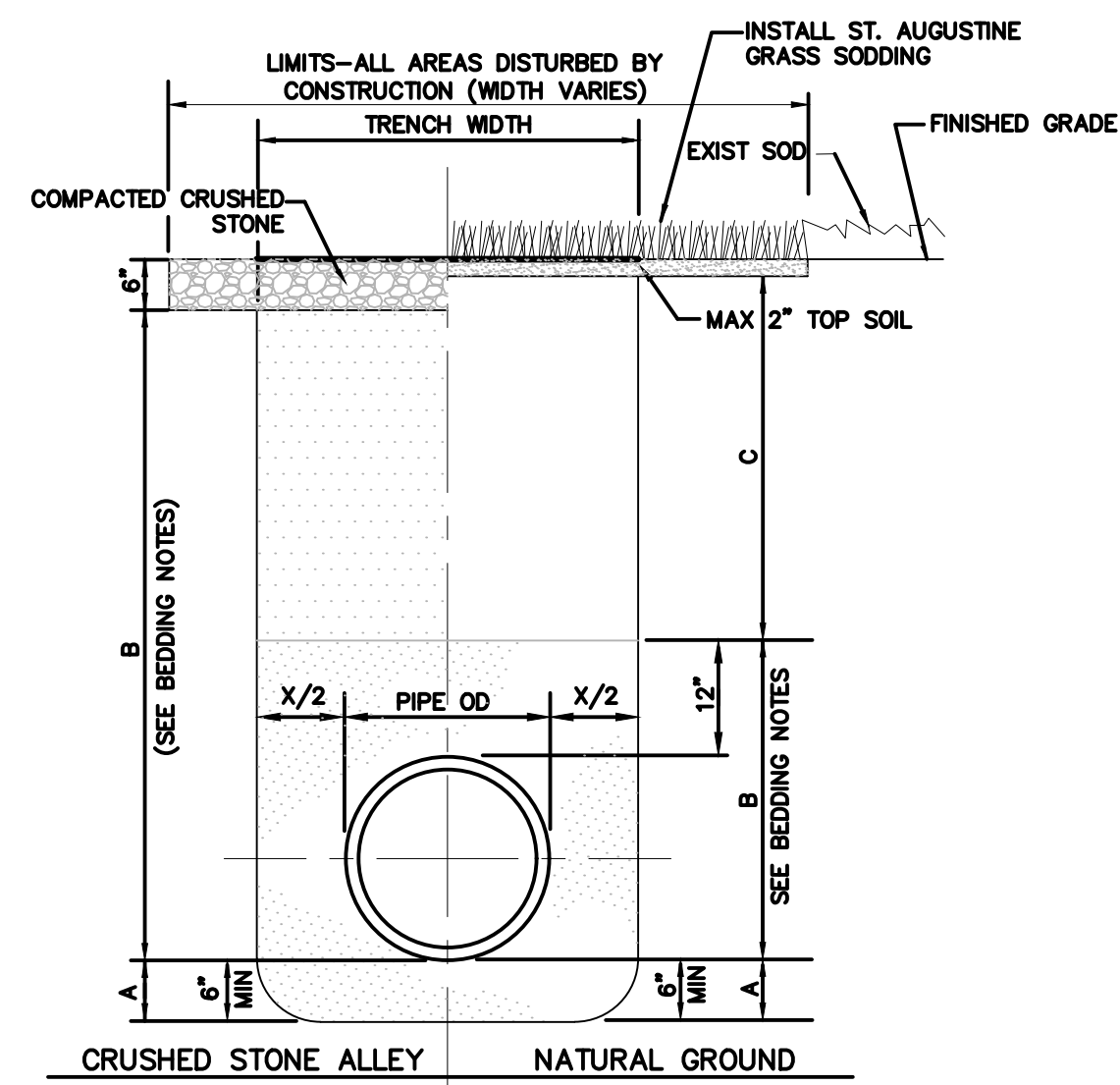
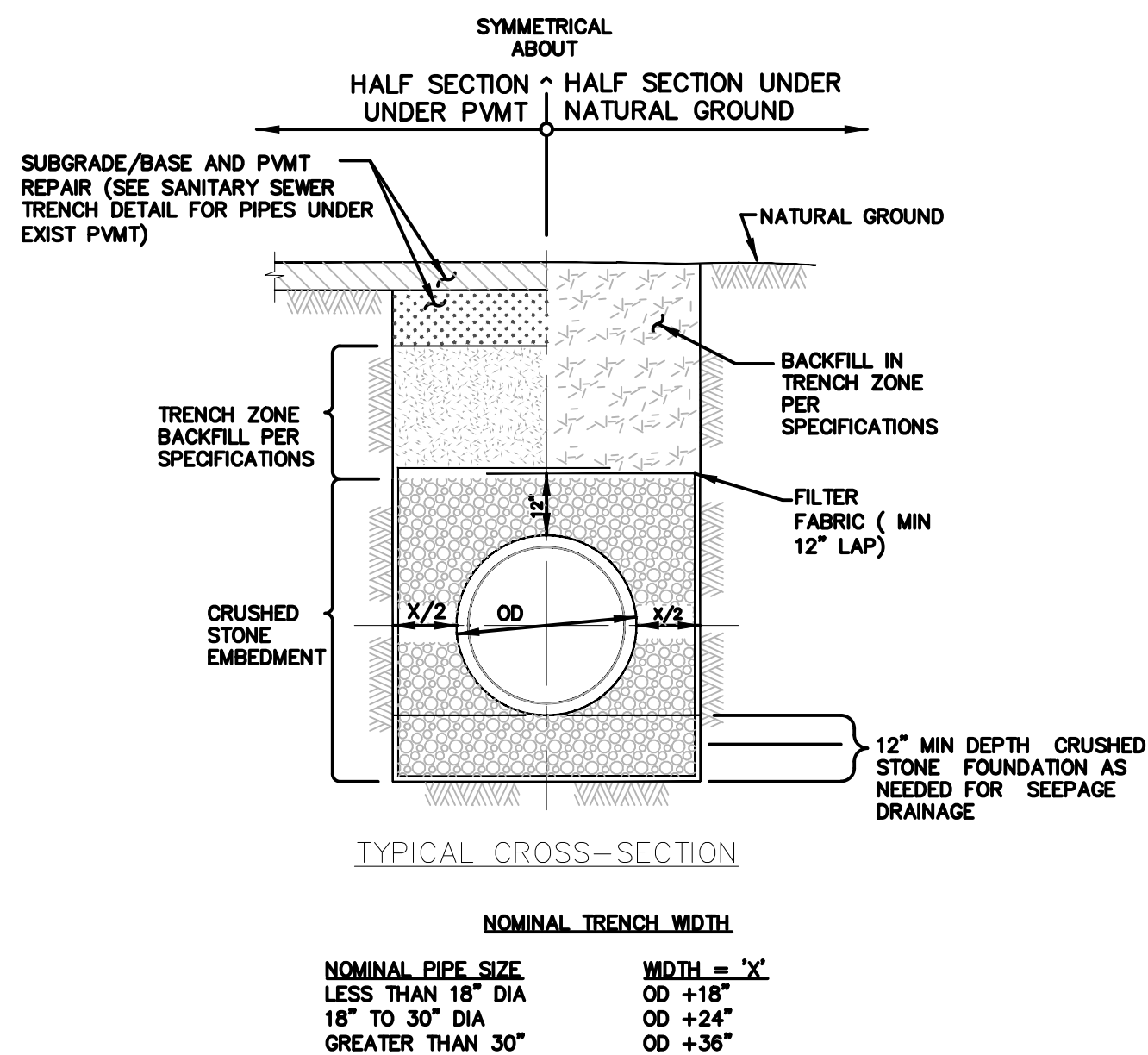
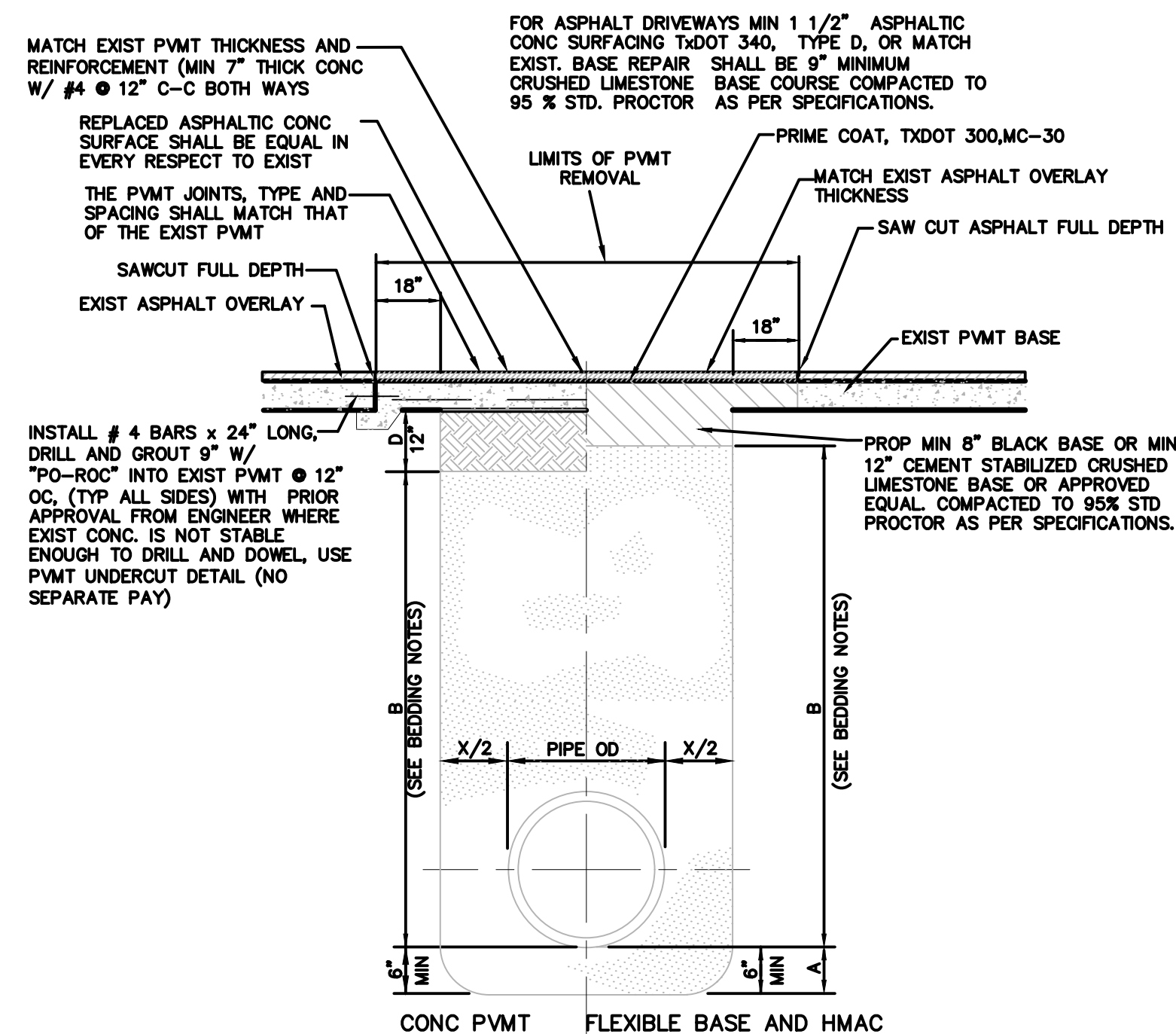
## Water Details I

Job No.: <b>10408611</b>	Scale:	SHEET  <b>16</b>  OF 23
Date: <b>October, 2024</b>	HORIZ : NA	
Dwn By: <b>G.S. Fuller</b>	VERT : NA	
Chkd By: <b>E. Him</b>	<b>[ ONE INCH ]</b>	
	IF ABOVE MARK DOES NOT MEASURE ONE INCH, THEN THIS DWG. NOT TO SCALE	

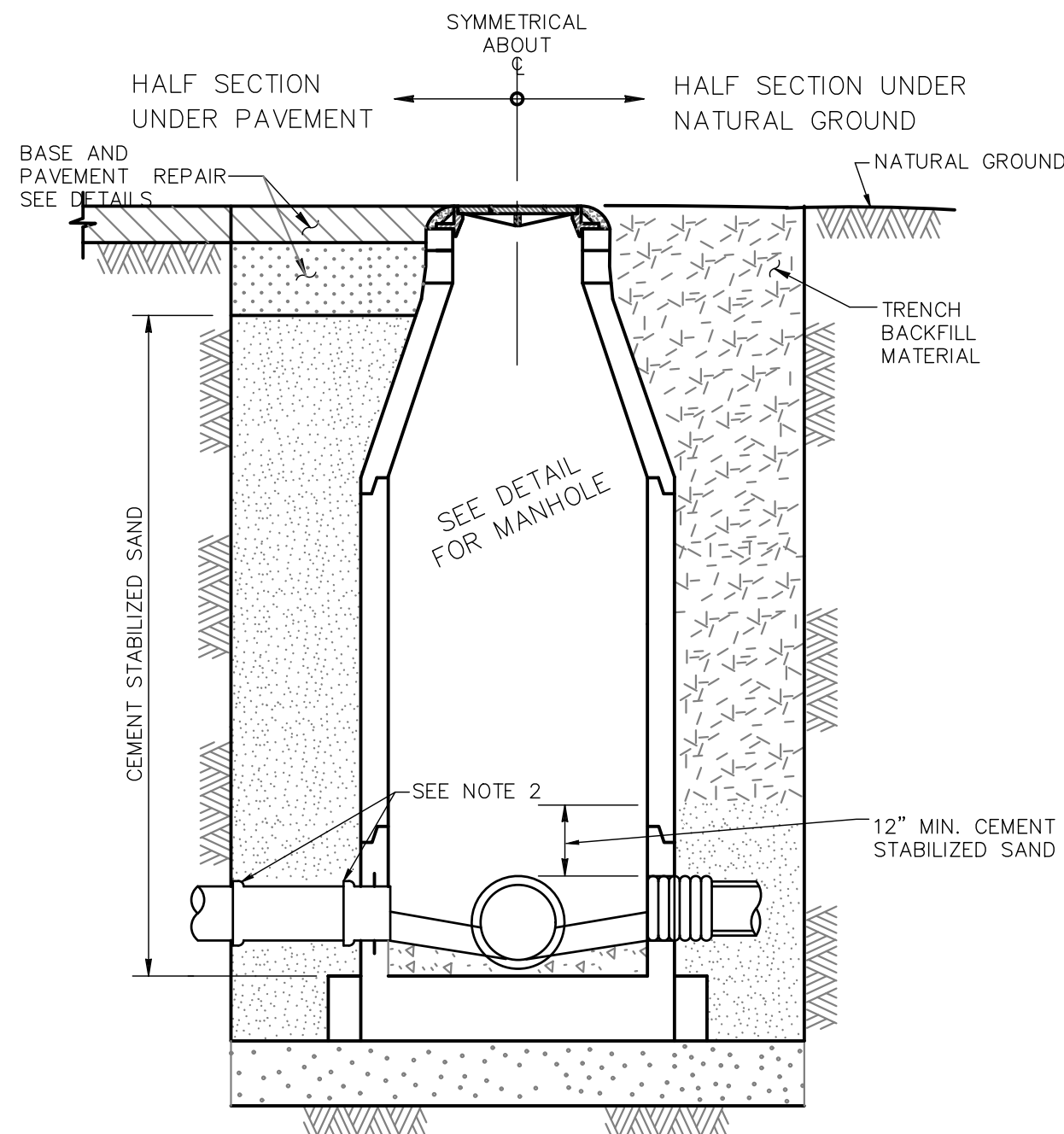






[illegible]



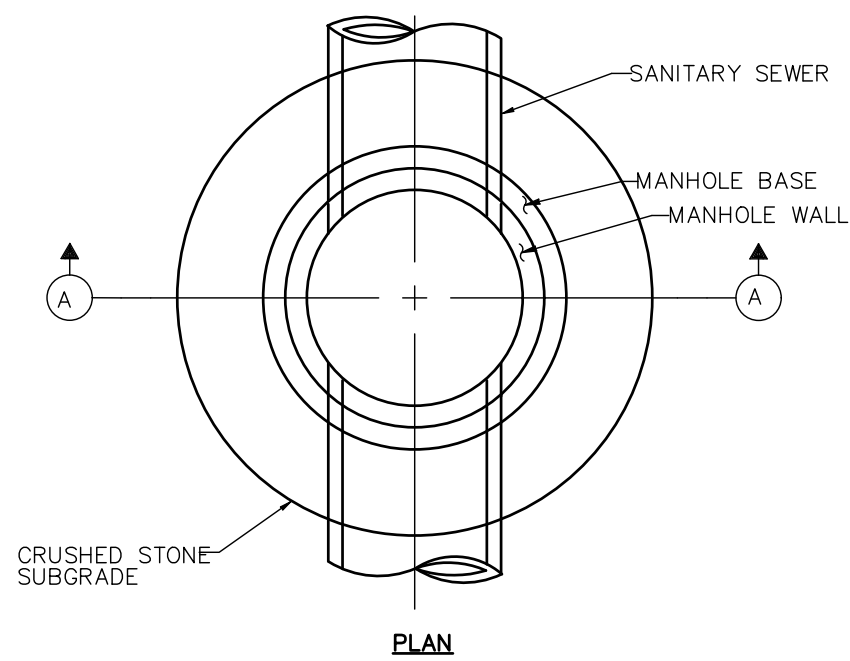


TYPICAL CROSS - SECTION

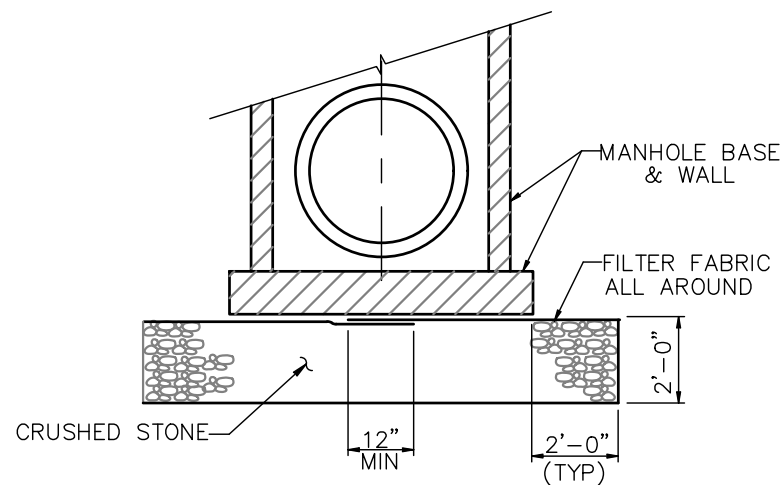
- NOTES:
1. THIS DETAIL SHALL BE UTILIZED FOR INSTALLATION OF MANHOLES AND STRUCTURES IN INSERTION PITS.
  2. PROVIDE BACKFILL TO MATCH ADJACENT PIPE TRENCH BACKFILL PER STANDARD SPECIFICATION.

### BACKFILL OF MANHOLES, INSERTION PITS, AND STRUCTURES

NOT TO SCALE



PLAN



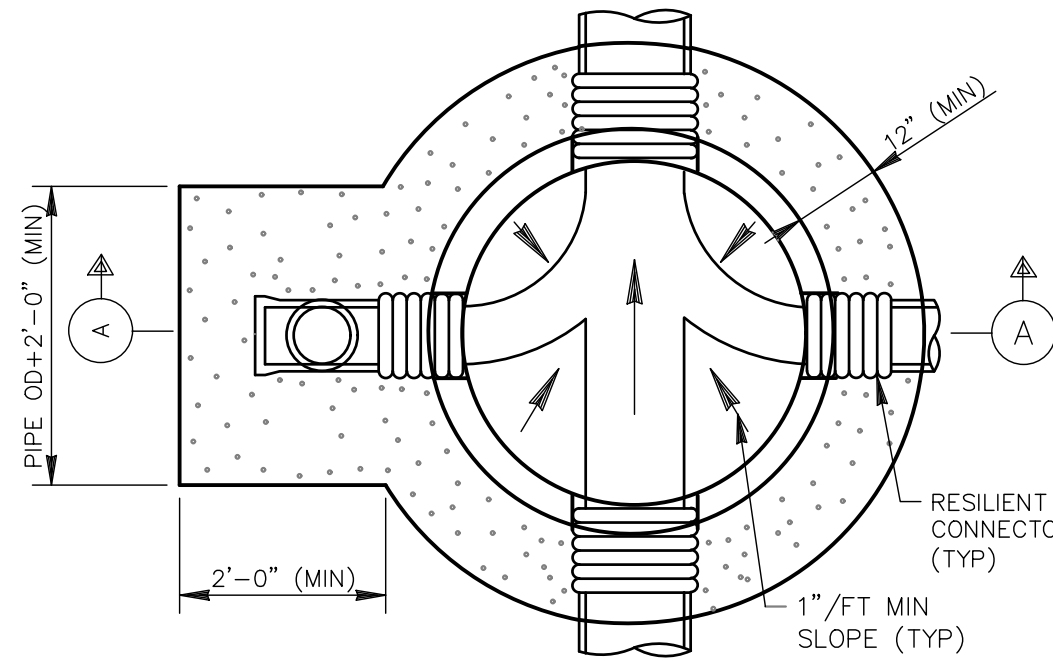
SECTION A

#### NOTES:

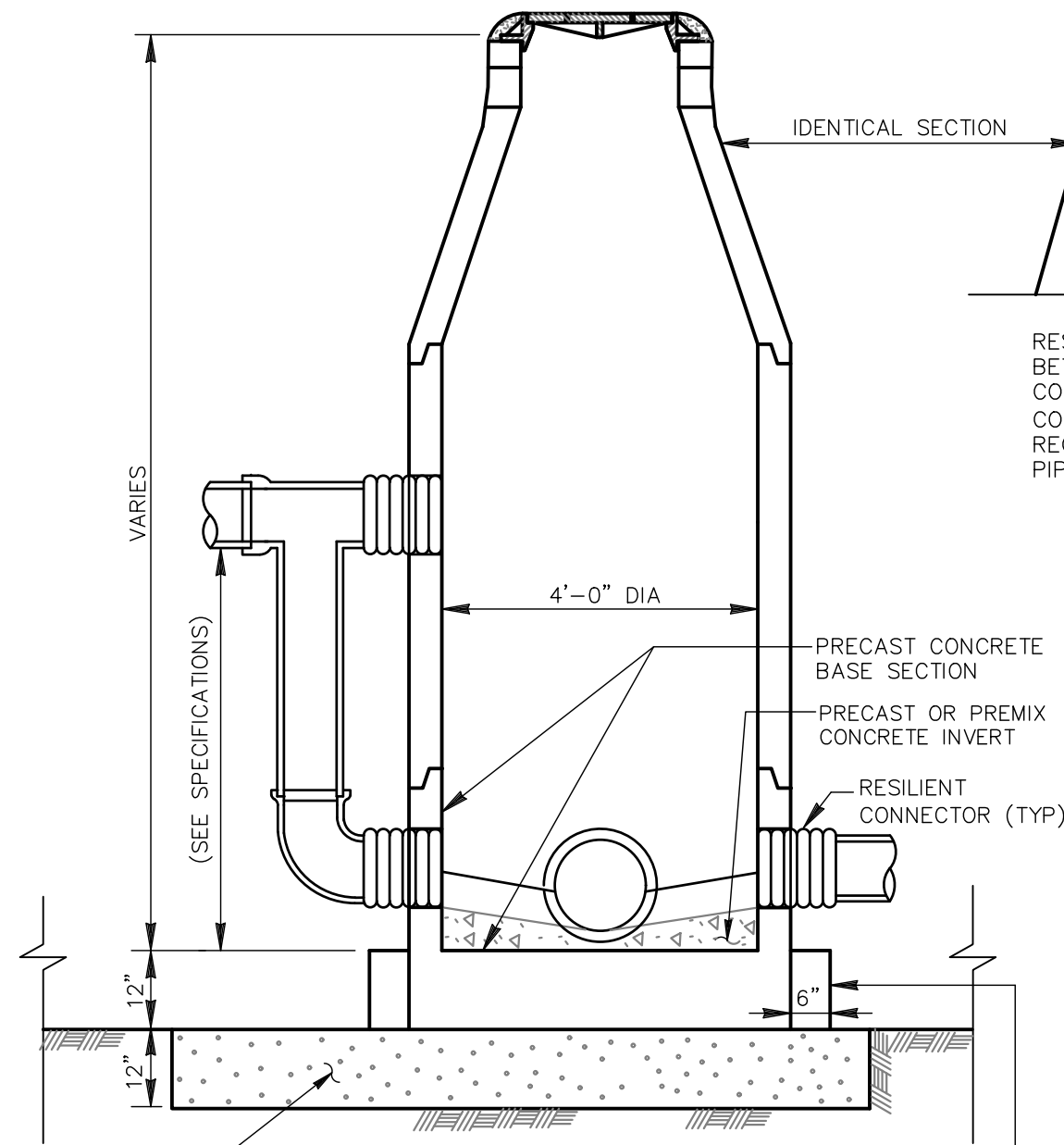
1. CRUSHED STONE SUPPORT UNDER A MANHOLE BASE SHALL BE INSTALLED AT LOCATIONS WHERE REQUIRED SUBGRADE COMPACTION OR DEWATERING CANNOT BE ACHIEVED.
2. WHERE HEAVING SUBGRADE CONDITIONS OCCUR, AS DETERMINED BY THE CONTRACTOR'S GEOTECHNICAL ENGINEER, A PILE SUPPORTED MANHOLE SHALL BE PROVIDED AFTER CONCURRENCE WITH ENGINEER.

### WET CONDITION BEDDING FOR PROPOSED MANHOLE

NOT TO SCALE



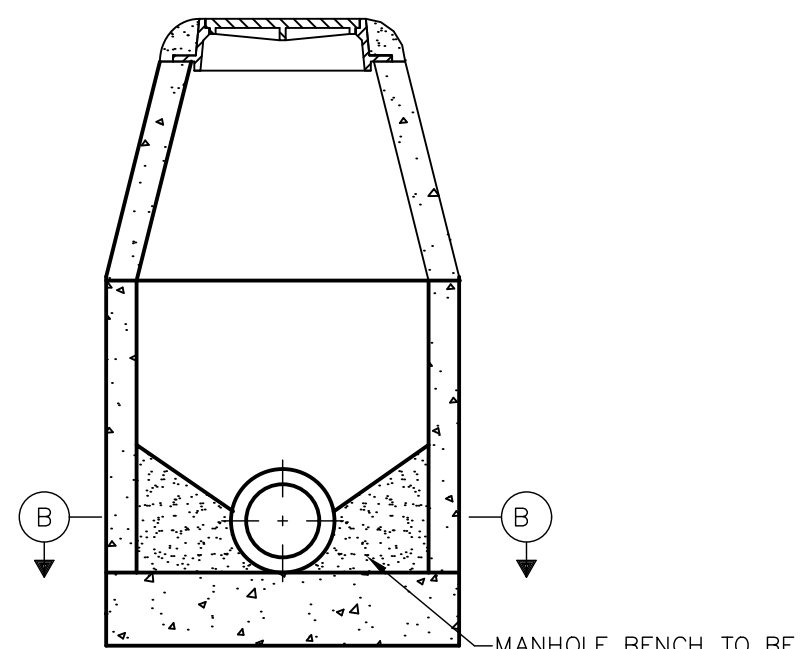
FOUNDATION PLAN



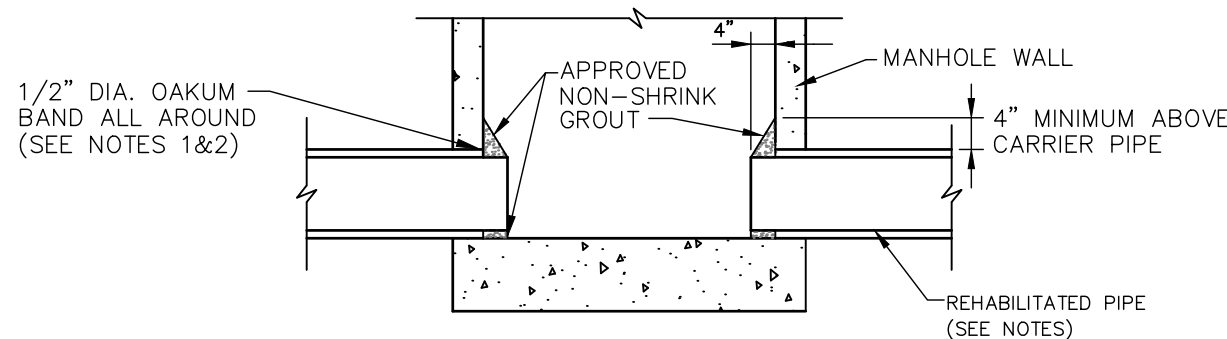
SECTION A

### SANITARY SEWER 4'-0" DIAMETER PRECAST CONCRETE MANHOLE

NOT TO SCALE

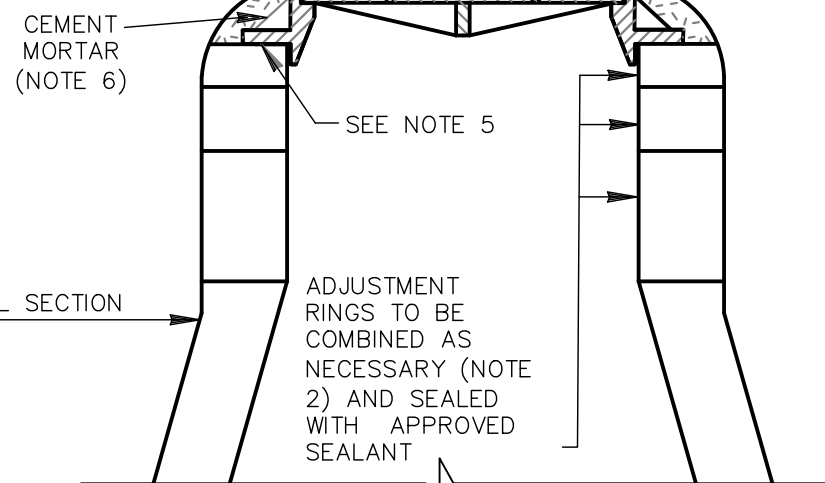


SECTION A



SECTION C

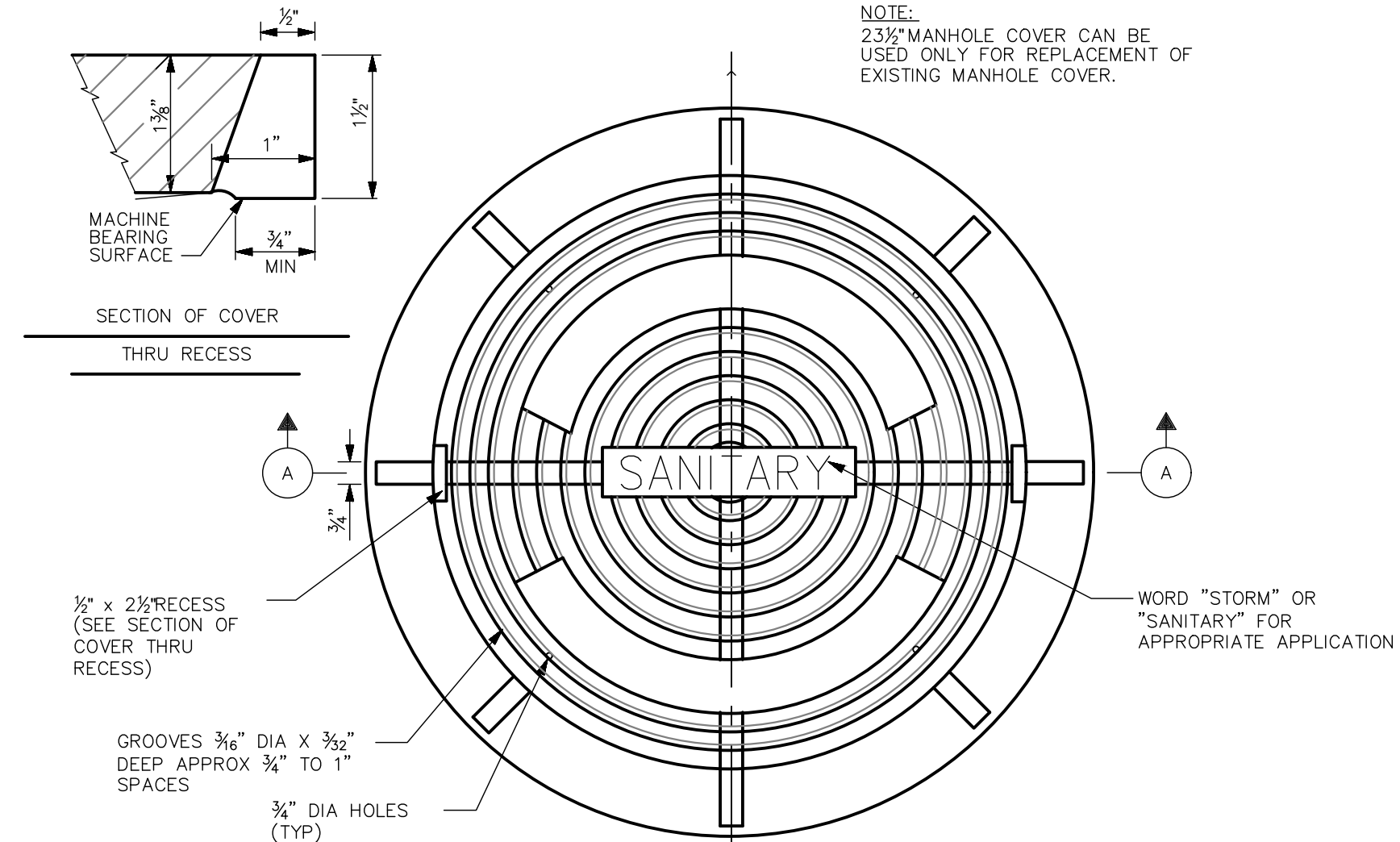
CAST IRON MANHOLE FRAME & COVER VULCAN CAT. NO V-1418-2 W/ "SANITARY" FORGED ON COVER, OR CITY APPROVED EQUAL--WHEN MANHOLE IS LOCATED WITHIN LIMITS OF ROADWAY PAVEMENT. WHEN MANHOLE IS LOCATED WITHIN LIMITS OF DRAINAGE DITCH: USE (VULCAN V-2418-2) WATER TIGHT MANHOLE W/ "SANITARY" FORGED ON COVER OR CITY APPROVED EQUAL.



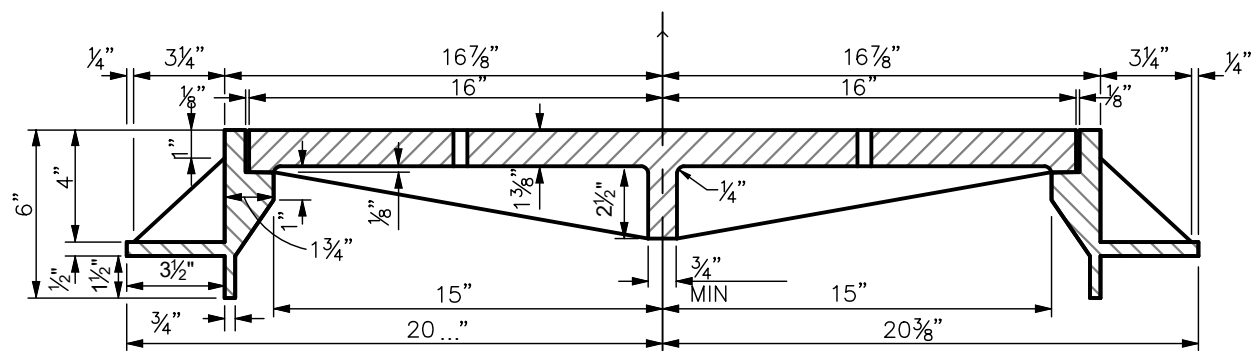
RESILIENT CONNECTORS FOR A WATER TIGHT SEAL BETWEEN MANHOLES AND SEWER PIPE SHALL CONFORM TO ASTM C-923; CAST IN GASKET CONNECTION AS PER PIPE MANUFACTURER'S REQUIREMENTS BETWEEN MANHOLE AND SEWER PIPE.

#### NOTES:

1. DEPTH OF MANHOLE DETERMINES SECTIONS REQUIRED.
2. PRECAST CONCRETE RINGS SHALL BE PROVIDED FOR A COMBINED ADJUSTMENT HEIGHT OF AT LEAST 12". THE TOTAL HEIGHT OF THE ADJUSTMENT RINGS SHALL NOT EXCEED PEAK EXCESS 1'-6".
3. MANHOLE WALL THICKNESS FOR DEPTH EXCEEDING 12'-0" SHALL BE DETERMINED TO MEET LOADING CONDITIONS MINIMUM THICKNESS 5".
4. MANHOLE DROP AND INTERSECTING PIPES SHALL BE INSTALLED AS PER SPECIFICATIONS.
5. SEAT MANHOLE FRAME IN SEALANT PER SPECIFICATION.
6. OMIT CEMENT MORTAR WHEN MANHOLE IS LOCATED IN PAVED AREAS.
7. PROVIDE BACKFILL TO MATCH ADJACENT PIPE TRENCH BACKFILL PER SPECIFICATION.



PLAN  
32" MANHOLE COVER WITH FRAME

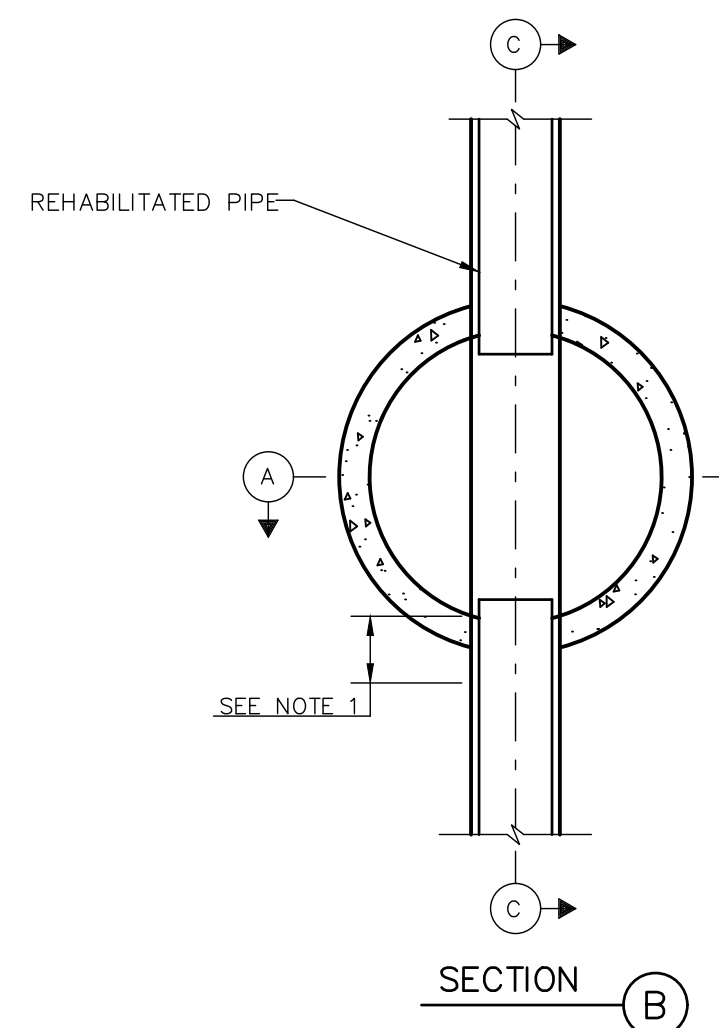


SECTION A

32" MANHOLE COVER WITH FRAME

### SANITARY MANHOLE FRAME & COVER

NOT TO SCALE



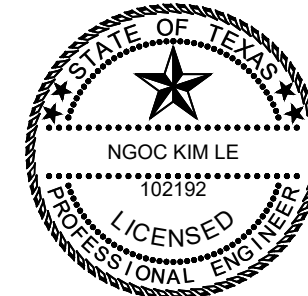
SECTION B

- NOTES:
1. THE EXISTING ANNULAR SPACE BETWEEN MANHOLE WALL AND THE PIPE, IF ANY, SHALL BE FILLED WITH ACTIVATED OAKUM, MINIMUM 12 INCH OR ONE-HALF PIPE DIAMETER
  2. ALL OAKUM SHALL BE SOAKED IN SCOTCH SEAL 5600 OR EQUAL.

### SANITARY SEWER SEALING OF PIPE BURSTING, CURED IN PLACE, & SLIPLINED PIPE

NOT TO SCALE

MK.	DESCRIPTION	DATE	DWN.	CHK.



Hye Kim He  
10-28-2024



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City of Hilshire Village, Texas

Hilshire Green Drive  
Paving, Drainage & Utility Improvements

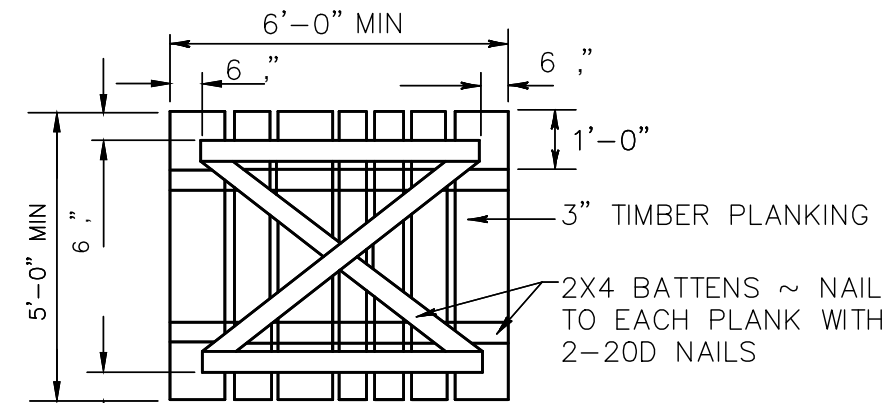
Sanitary Sewer Details II

Job No.: 10408811  
Date: October, 2024  
Dwn By: G.S. Fuller  
Chkd By: E. Him

Scale:  
HORZ : N/A  
VERT : N/A  
ONE INCH  
IF ABOVE MARK DOES NOT  
MEASURE ONE INCH, THEN  
THIS DWG. NOT TO SCALE

SHEET  
19  
OF 23





## TEMPORARY TIMBER COVER

1. DEPTH OF MANHOLE DETERMINES SECTIONS REQUIRED.
2. PRECAST CONCRETE RINGS SHALL BE PROVIDED FOR A COMBINED ADJUSTMENT HEIGHT OF AT LEAST 12". THE TOTAL HEIGHT OF THE ADJUSTMENT RINGS SHALL NOT EXCEED 1'-6".
3. MANHOLE WALL THICKNESS FOR DEPTH EXCEEDING 12'-0" SHALL BE DETERMINED TO MEET LOADING CONDITIONS. MIN THICKNESS 8".
4. MIN REINFORCING IN THE PRECAST CONCRETE BASE SHALL BE # 5 @ 8" EW.

TOP AND BOTTOM SLABS ALONG WITH WALL THICKNESS AND RELOCATE STRUCTURAL STEEL INCLUDE CORNERS OR FLAT TOP AND RINGS. SHALL BE PER MANUFACTURER, SIGNED AND SEALED BY AN ENGINEER LICENSED IN THE STATE OF TEXAS FOR EACH PROPOSED JUNCTION BOX ON THE PLANS. PROVIDE LOCATION WITH STREET NAME, STATION AND OFFSET.

5. ALL PRECAST STORM BOX MANHOLES SHALL BE CONSTRUCTED OF 4000 Psi CONCRETE, REINFORCED 60000 Psi Hs 20 LOADING.

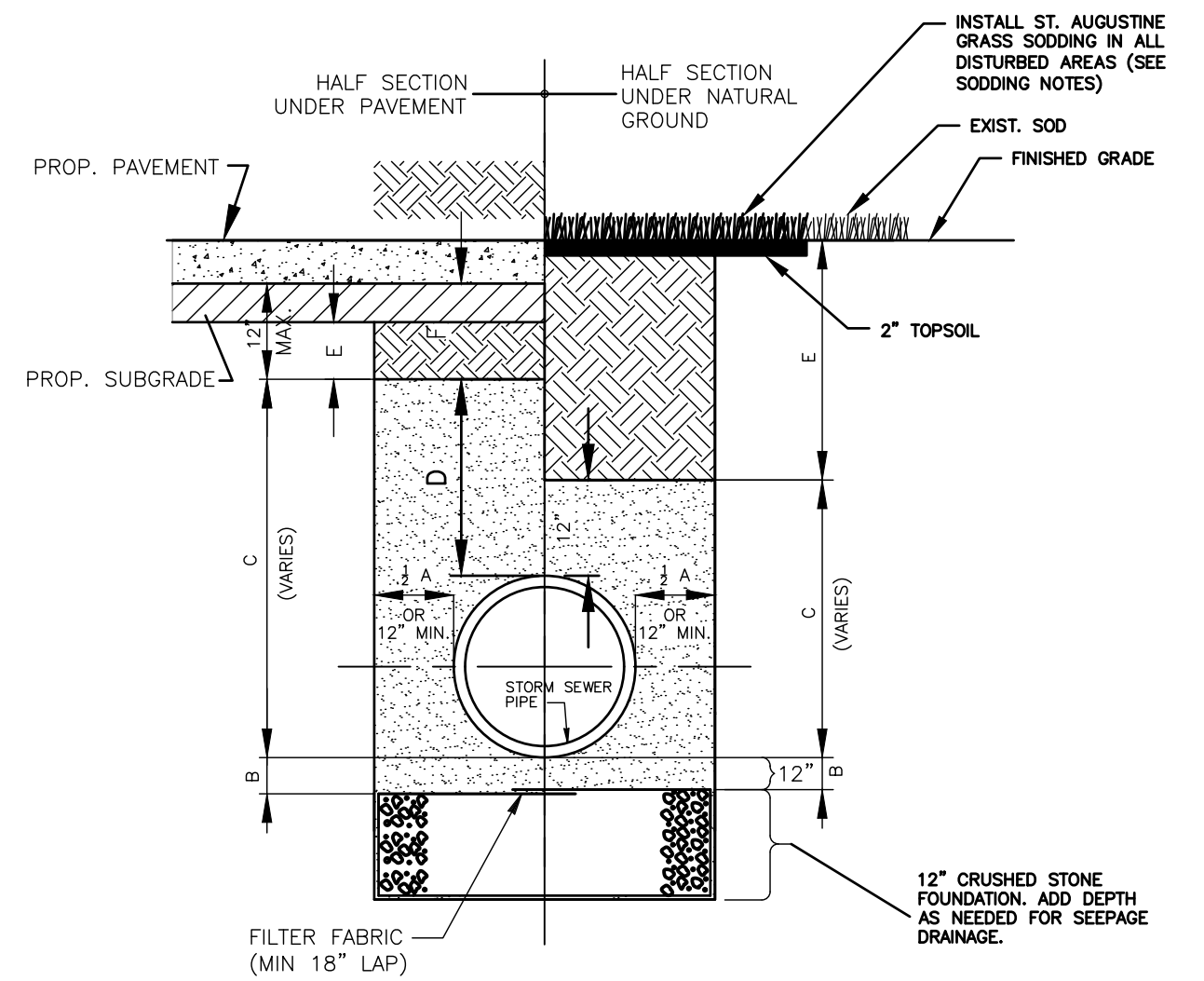
TOP AND BOTTOM SLABS ALONG WITH WALL THICKNESS AND RELOCATE STRUCTURAL STEEL INCLUDE CONES OR FLAT TOP AND RINGS, SHALL BE PER MANUFACTURER, SIGNED AND SEALED BY AN ENGINEER LICENSED IN THE STATE OF TEXAS FOR EACH PROPOSED JUNCTION BOX ON THE PLANS. PROVIDE LOCATION WITH STREET NAME, STATION AND OFFSET.

NOT TO SCALE

1. TRENCH EXCAVATION, BEDDING & BACKFILL COSTS ARE INCIDENTAL TO PIPE INSTALLATION AND ARE BASED ON THE LIMITS SHOWN IN THESE DETAILS. ANY COST INCURRED FOR AREAS EXCAVATED AND/OR REQUIRING BACKFILL BEYOND THESE LIMITS RESULTING FROM CONTRACTORS FAILURE TO CONTROL THESE LIMITS SHALL BE BORNE BY THE CONTRACTOR.
2. MAX TRENCH WIDTH SHALL NOT BE GREATER THAN MIN TRENCH WIDTH PLUS 24", UNLESS OTHERWISE NOTED.
3. IF OUTSIDE EDGE OF PIPE IS WITHIN 3' OF BACK OF CURB, BACKFILL SHALL BE PERFORMED AS UNDER PAVEMENT.

A.	MIN. TRENCH WIDTH SHALL BE PIPE O.D. PLUS AN ALLOWANCE "A" FOR THE NOMINAL PIPE SIZE.	
	<u>NOMINAL PIPE SIZE</u>	<u>"A"</u>
	<18"	24"
	18" TO 30"	24"
	>30"	36"
B.	CEMENT STABILIZED SAND (1:1 SACKS OF CEMENT PER TON, COMPACTED TO AT LEAST 95% OF MAX. STD. PROCTOR) PLACED BEFORE PIPE IS LAID, TO FOLLOW LINE OF PIPE OR ABOVE—MINIMUM DEPTH = 12".	
C.	CEMENT STABILIZED SAND (AS SPECIFIED ABOVE) THOROUGHLY RODDED, PLACED AFTER PIPE IS LAID.	
D.	CEMENT STABILIZED SAND TO 12-IN BELOW TOP OF SUBGRADE.	
E.	SELECT EARTH BACKFILL WITH MAX LIQUID LIMIT OF 40, MIN. P.I. OF 7, MAX P.I. OF 20 CONTAINING NO ROCKS OR OTHER DEBRIS NOR CONTAINING ANY DIRT CLODS EXCEEDING 6" IN ANY DIMENSION. PLACED IN 6" LAYERS, MOISTENED IF NECESSARY AND THOROUGHLY COMPACTED TO 95% DENSITY AS DETERMINED BY ASTM D698, UNLESS OTHERWISE NOTED. IN SITU SOILS MAY BE UTILIZE ONLY IF IT MEETS THIS CRITERIA AND SUITABLE MATERIAL CLASSIFICATION PER THE SPECIFICATIONS.	
F.	IN THE EVENT DIMENSION IS LESS THAN 8", CEMENT STABILIZED SAND SHALL BE EXTENDED TO BOTTOM OF CONCRETE.	

1. SODDING SHALL BE INSTALLED IN AREAS DISTURBED BY CONSTRUCTION.
2. CONTRACTOR SHALL REPLACE SODDING IN AREAS DAMAGED BY CONSTRUCTION AND THE REPLACEMENT SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT.
3. IF EXISTING LANDSCAPING OTHER THAN GRASS IS WITHIN THESE AREAS, THE CONTRACTOR SHALL REBUILD OR REINSTALL THE LANDSCAPING PER THE PERTINENT BID ITEM.



## WET CONDITION BEDDING FOR STORM SEWER PIPE INSTALLATION

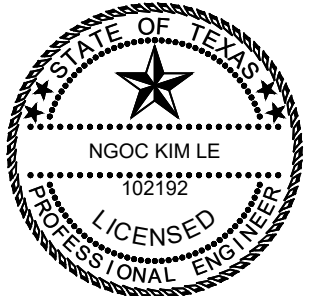
NOT TO SCALE

## PRECAST CONCRETE MANHOLE

NOT TO SCALE

1. SEE PLANS FOR MANHOLE SIZE AND SHAPE.
2. ALL CONCRETE SHALL BE CLASS A. ALL EXPOSED CORNERS SHALL BE CHAMFERED 3/4". PIPES SHALL ENTER INLETS AS SHOWN ELSEWHERE ON PLANS. ALL QUANTITIES ARE FOR CONTRACTORS' USE ONLY. SLOPE TOP OF INLET AS DIRECTED TO MATCH GRADED SECTION.
3. ALL MATERIALS USED IN CASTING MANHOLE COVERS SHALL CONFORM TO ASTM SPECIFICATIONS.
4. MANHOLE RING AND COVER SHALL BE PER SPECIFICATIONS. CONNECTION OF PIPES TO PRECAST UNITS SHALL BE SEALED WITH NON-SHRINK GROUT, INSIDE AND OUTSIDE.

MK.	DESCRIPTION	DATE	DWN.	CHK.



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10-28-2024



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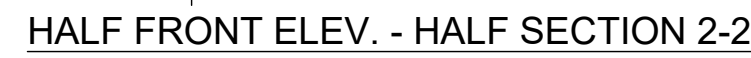
City of Hilshire Village, Texas

Hilshire Green Drive  
Paving, Drainage & Utility Improvements

## Storm Sewer Details I

Job No.: <b>10408611</b>	Scale: HORZ : NA VERT : NA <b>[ONE INCH]</b> IF ABOVE MARK DOES NOT MEASURE ONE INCH, THEN THIS DWG. NOT TO SCALE	SHEET <b>20</b>
Date: <b>October, 2024</b>		
Dwn By: <b>G.S. Fuller</b>		
Chkd By: <b>E. Him</b>		OF 23





## SECTION 1-1



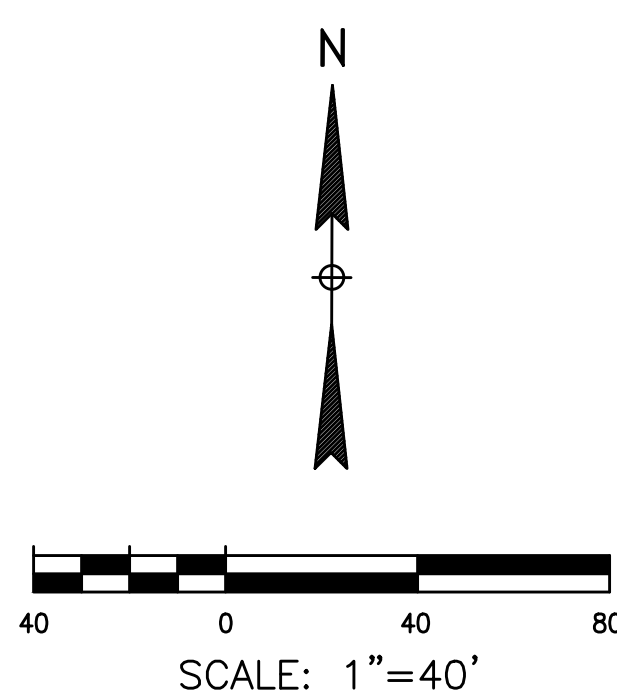
TYPE B-B INLET

PRECAST CURB BEAM

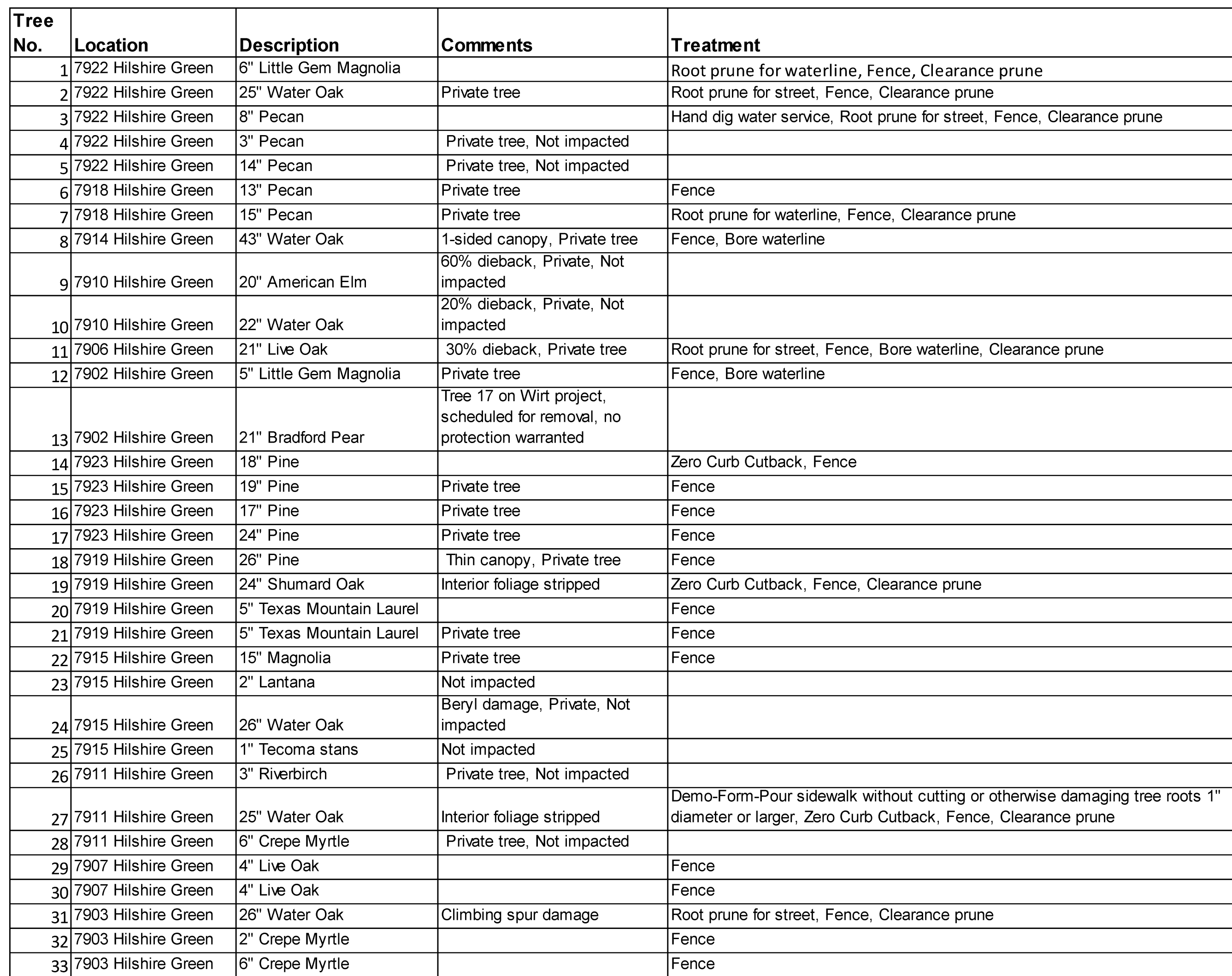


MR.	DESCRIPTION				DATE	DWN.	CHK.					
<div style="text-align: center;">  <p><i>Ngoc Kim Le</i></p> <p>10-28-2024</p> </div> <div style="text-align: center;">  <p>HDR Engineering Inc. Texas Reg. No. 754              4828 Loop Central Drive, Suite 700 • Houston, Texas 77081              (713) 622-9264 • Fax (713) 622-9265 • <a href="http://www.hdrinc.com">www.hdrinc.com</a></p> </div> <div style="text-align: center;"> <p>City of Hilshire Village, Texas</p> <p>Hilshire Green Drive              Paving, Drainage &amp; Utility Improvements</p> <p>Storm Sewer Details II</p> </div> <table border="1" style="width: 100%;"> <tr> <td style="width: 40%;">                 Job No.: <b>10408811</b>                  Date: <b>October, 2024</b>                  Dwn By: <b>G.S. Fuller</b>                  Chkd By: <b>E. Hlm</b> </td> <td style="width: 20%;">                 Scale:                  HORIZ : NA                  VERT : NA  <div style="border: 1px solid black; padding: 2px; text-align: center;">ONE INCH</div>                 IF ABOVE MARK DOES NOT                  MEASURE ONE INCH THEN                  THIS DWG. NOT TO SCALE             </td> <td style="width: 40%; text-align: center;">                 SHEET  <div style="font-size: 2em;">21</div>                 OF 23             </td> </tr> </table>										Job No.: <b>10408811</b> Date: <b>October, 2024</b> Dwn By: <b>G.S. Fuller</b> Chkd By: <b>E. Hlm</b>	Scale: HORIZ : NA VERT : NA <div style="border: 1px solid black; padding: 2px; text-align: center;">ONE INCH</div> IF ABOVE MARK DOES NOT MEASURE ONE INCH THEN THIS DWG. NOT TO SCALE	SHEET <div style="font-size: 2em;">21</div> OF 23
Job No.: <b>10408811</b> Date: <b>October, 2024</b> Dwn By: <b>G.S. Fuller</b> Chkd By: <b>E. Hlm</b>	Scale: HORIZ : NA VERT : NA <div style="border: 1px solid black; padding: 2px; text-align: center;">ONE INCH</div> IF ABOVE MARK DOES NOT MEASURE ONE INCH THEN THIS DWG. NOT TO SCALE	SHEET <div style="font-size: 2em;">21</div> OF 23										



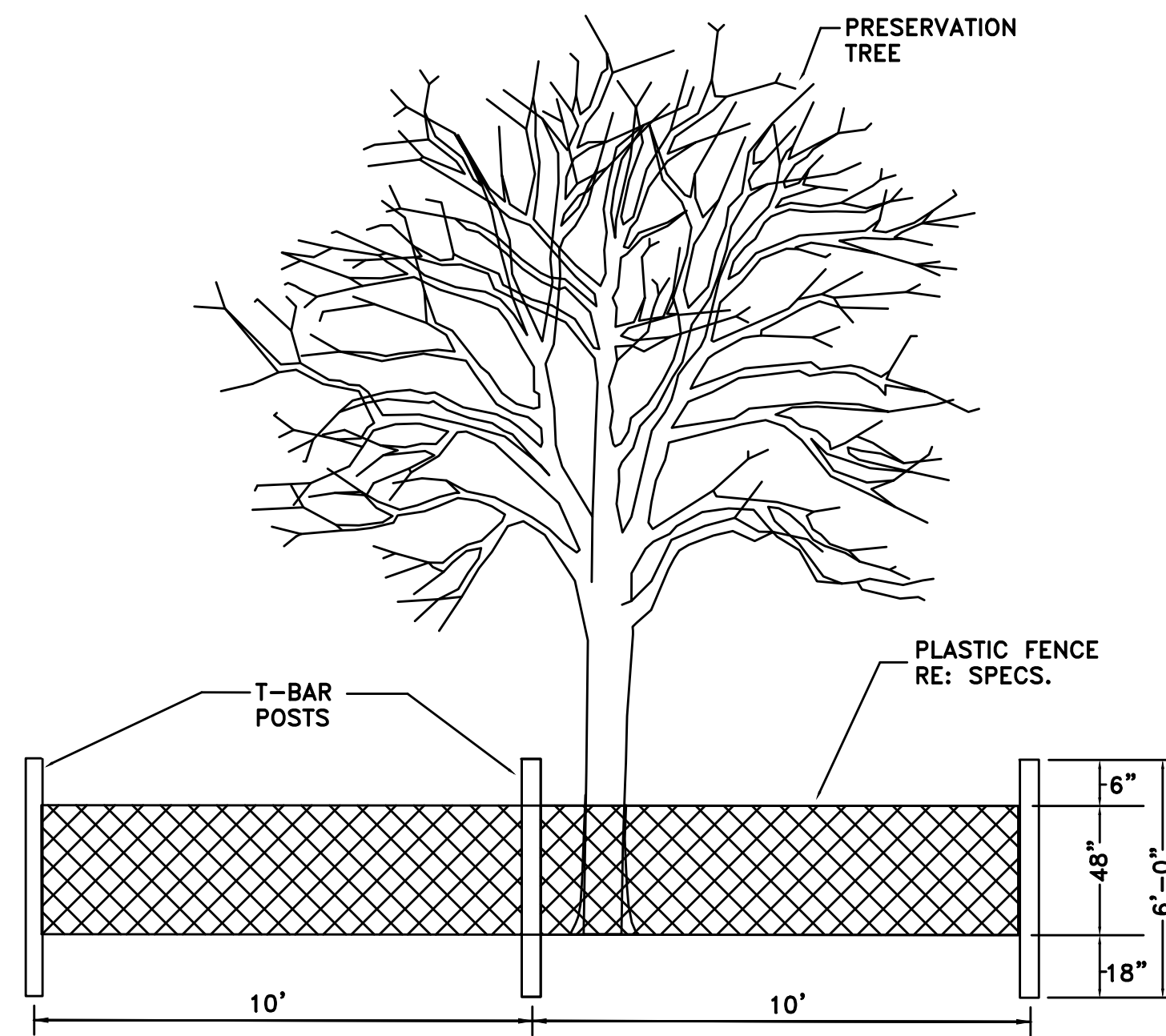


- NOTE:**
1. THIS TREE PROTECTION PLAN WAS DEVELOPED WITH INFORMATION PROVIDED BY DESIGN ENGINEER IN DRAWINGS DATED OCTOBER 2024. THE PLAN CONSIDERS ALL FITTINGS, VERTICAL OFFSETS AND AREAS OF NECESSARY EXCAVATION. CHANGES MADE TO DESIGN MAY COMPROMISE THE TREE PROTECTION PLAN. REFER SPECIFICATIONS 01535. CONDITION OF EACH TREE IS BASED ON VISUAL EVALUATION AT TIME OF DESIGN. CONDITION AND STRUCTURAL INTEGRITY OF EACH TREE IS NOT GUARANTEED BY DESIGNER AT ANY POINT IN THE FUTURE, AS ENVIRONMENTAL AND MAINTENANCE INFLUENCES ON EACH TREE CAN NOT BE DETERMINED BY DESIGNER.
  2. IN AREAS WHERE INDIVIDUAL TREES HAVE NOT BEEN TIED IN BY SURVEY APPROXIMATE LOCATION IS INDICATED ON TPP. ACCURACY OF REPRESENTED LOCATION CAN'T, AND IS NOT GUARANTEED BY DESIGNER.
  3. THE CONTRACTOR'S ARBORIST WILL MARK LOCATIONS OF THE NEW TREES AND OBTAIN APPROVAL BY THE CITY ENGINEER AND CITY FORESTER BEFORE PURCHASING AND PLANTING TREES.

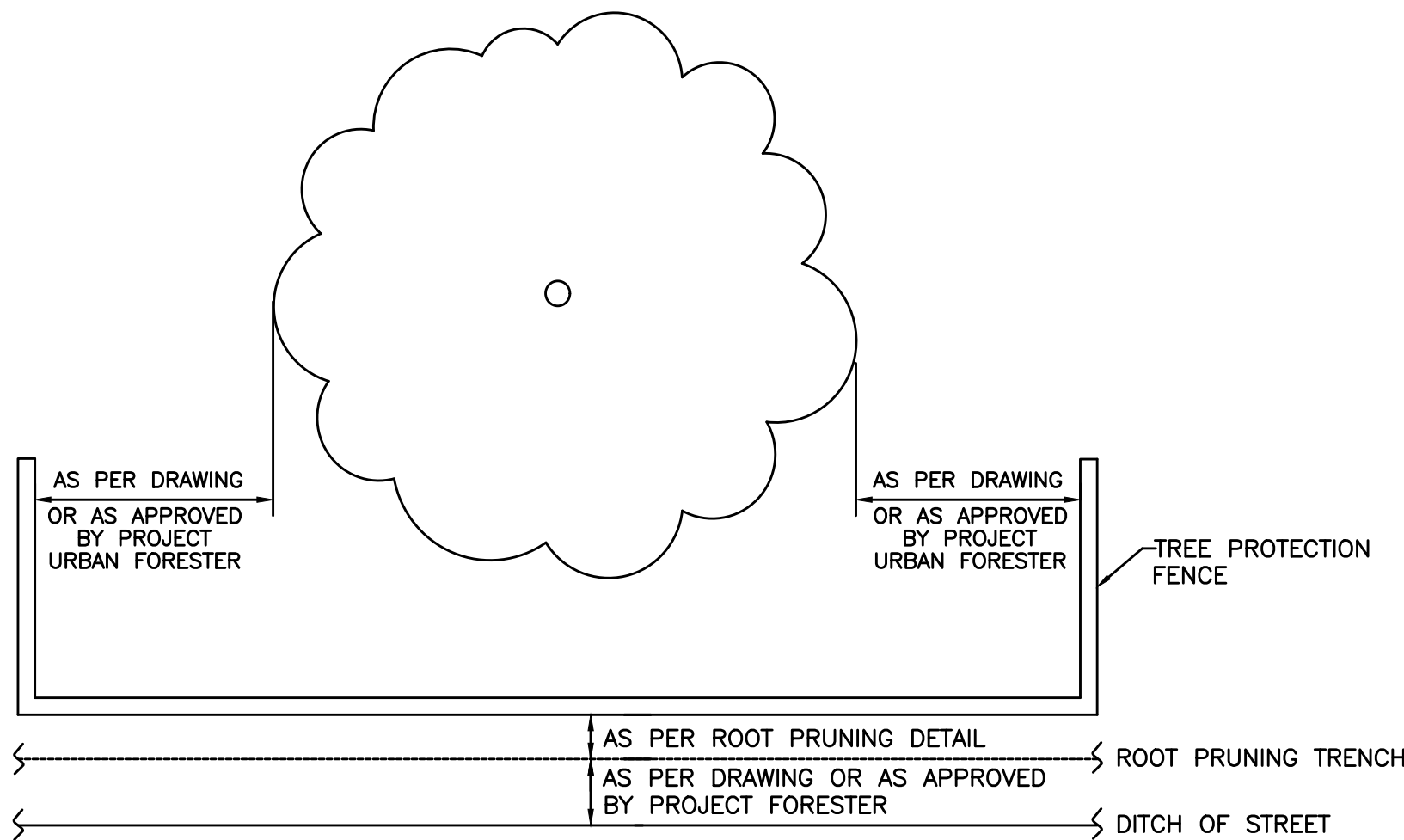


NO.	DESCRIPTION	DATE	DWN.	CHK.	
Urban Forestry, Inc. 210 Stone Bush Ct. • Katy, Texas 77493 281-391-0022 ckoehl@ckoehlurbanforestry.com					
APPROVED: Craig N. Koehl    10-24-2024					
HDR Engineering Inc. Texas Reg. No. 754 4828 Loop Central Drive, Suite 700 • Houston, Texas 77081 (713) 622-9264 • Fax (713) 622-9265 • www.hdrinc.com					
City of Hilshire Village, Texas					
Hilshire Green Drive Paving, Drainage & Utility Improvements					
<b>TREE PROTECTION PLAN</b> <b>SHEET 1 OF 2</b>					
Job No.: I040861I		Scale:		SHEET	
Date: August, 2024		HORIZ :		<div style="font-size: 4em; float: right; margin-right: 10px;">22</div> OF 23	
		VERT :			
Dwn By: N.B.		<div style="border: 1px solid black; padding: 5px; display: inline-block;">One Inch</div> If above mark does not measure one inch, then this dwg. not to scale			
Chkd By: C.N.K.					

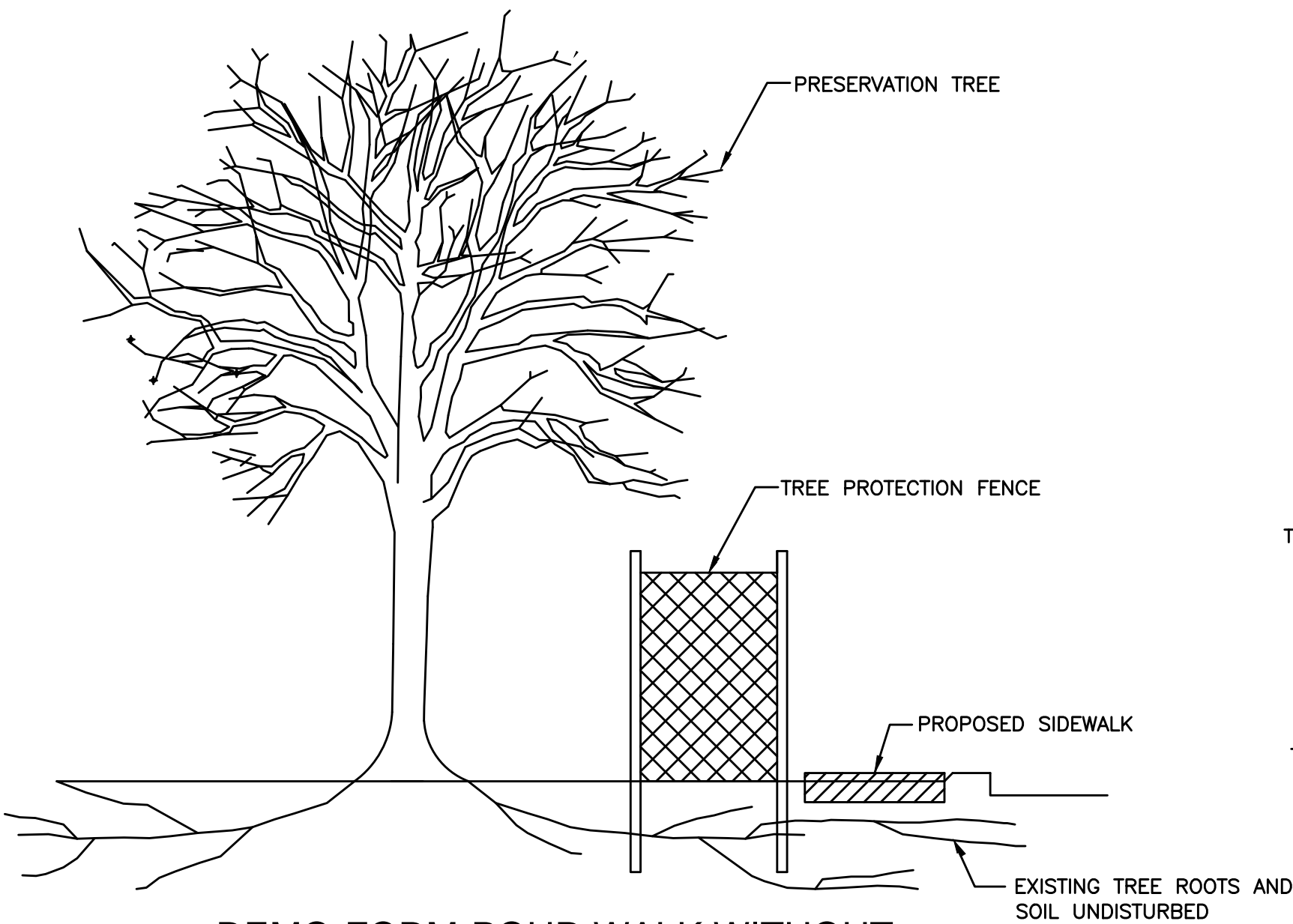




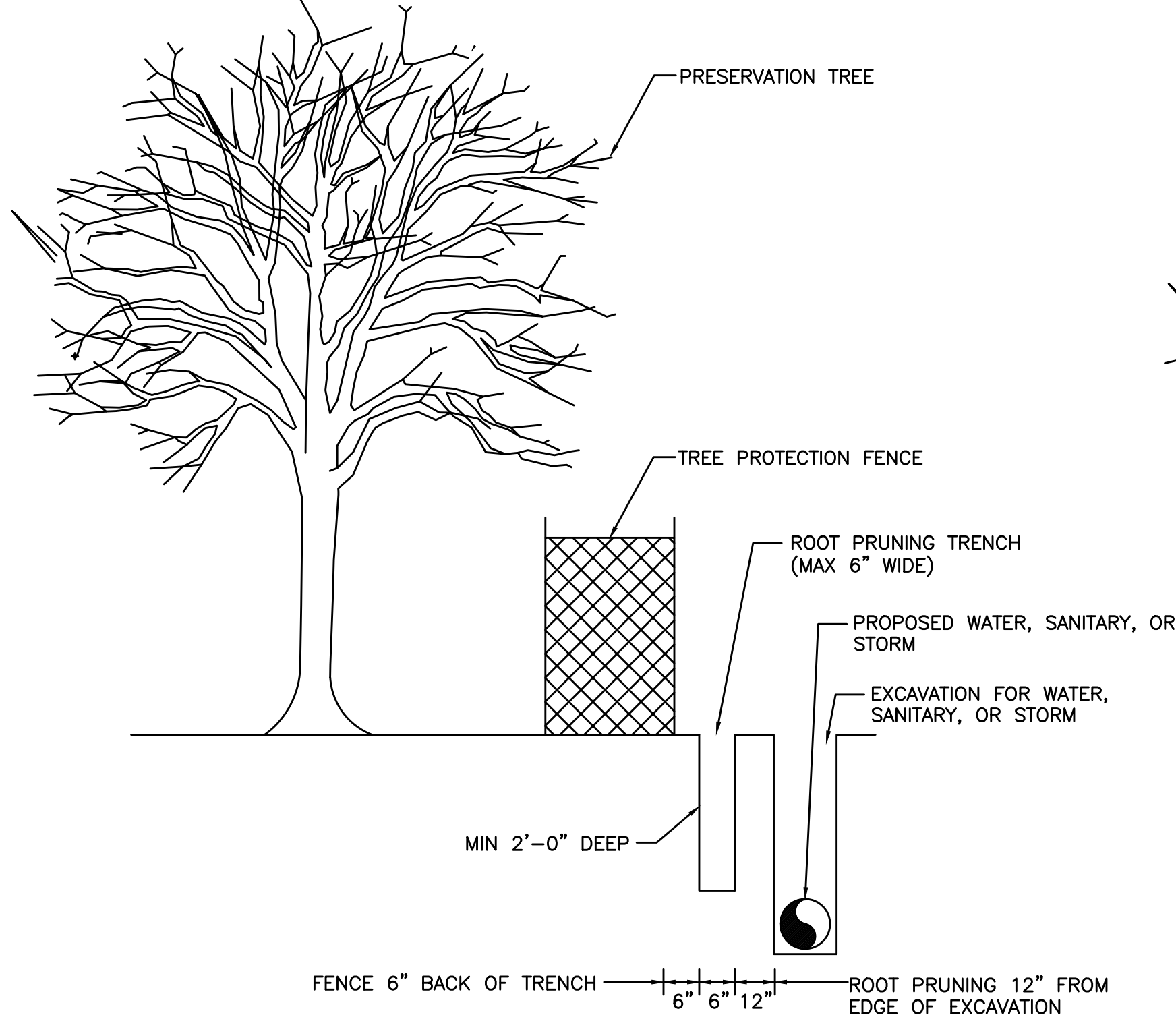
**TREE PROTECTION FENCING DETAIL A**  
NOT TO SCALE



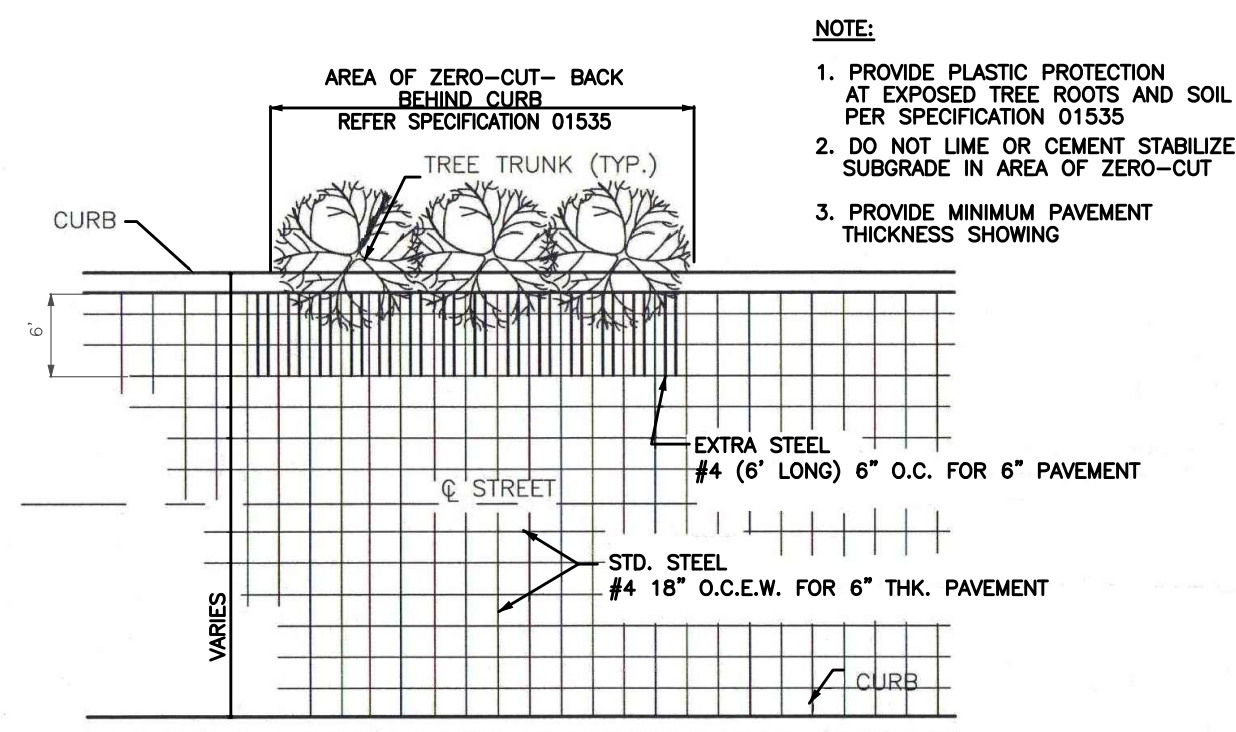
**TREE PROTECTION FENCING DETAIL B**  
NOT TO SCALE



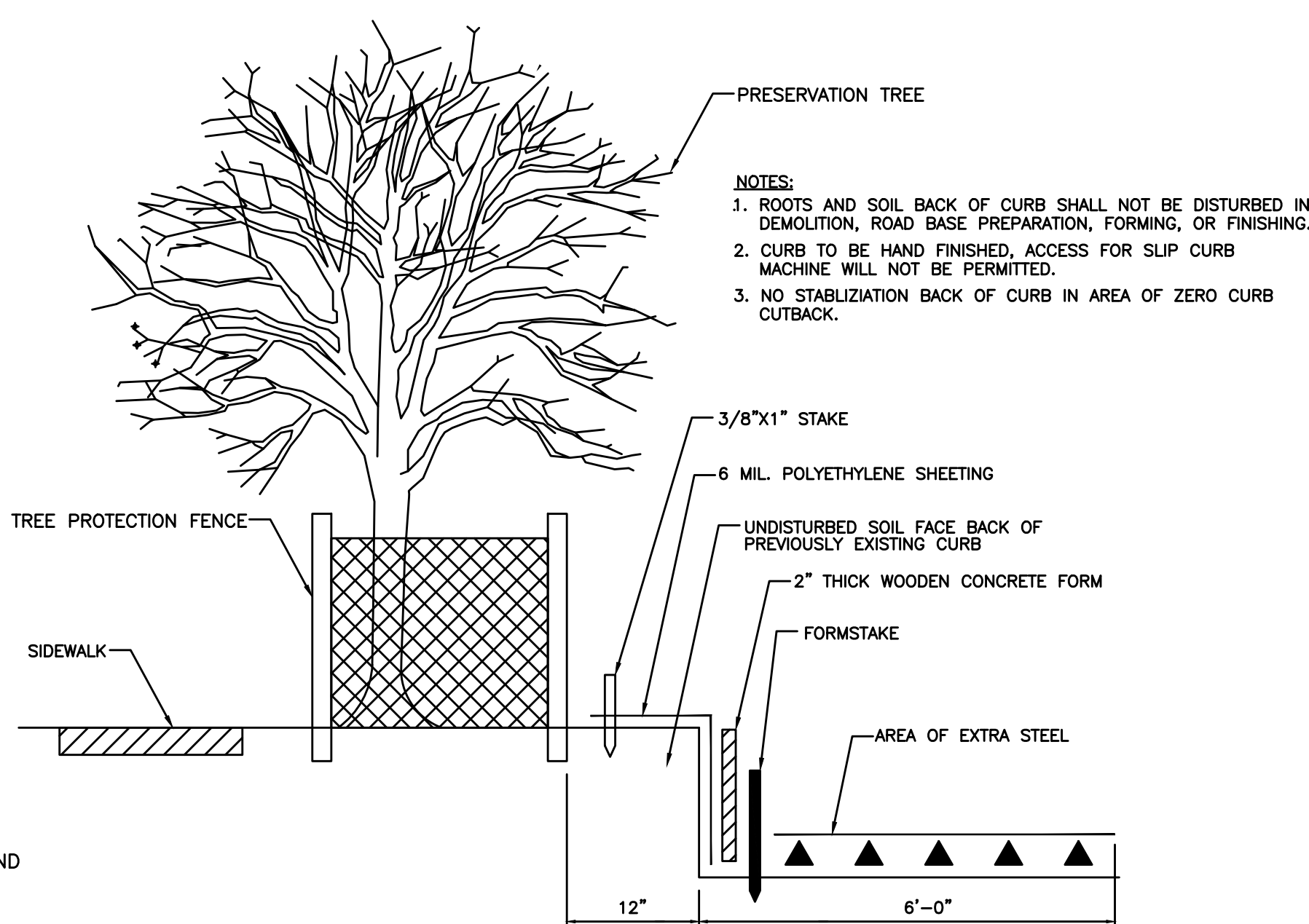
**DEMO-FORM-POUR WALK WITHOUT  
DAMAGE TO TREE ROOTS 1" DIAMETER OR LARGER**  
NOT TO SCALE



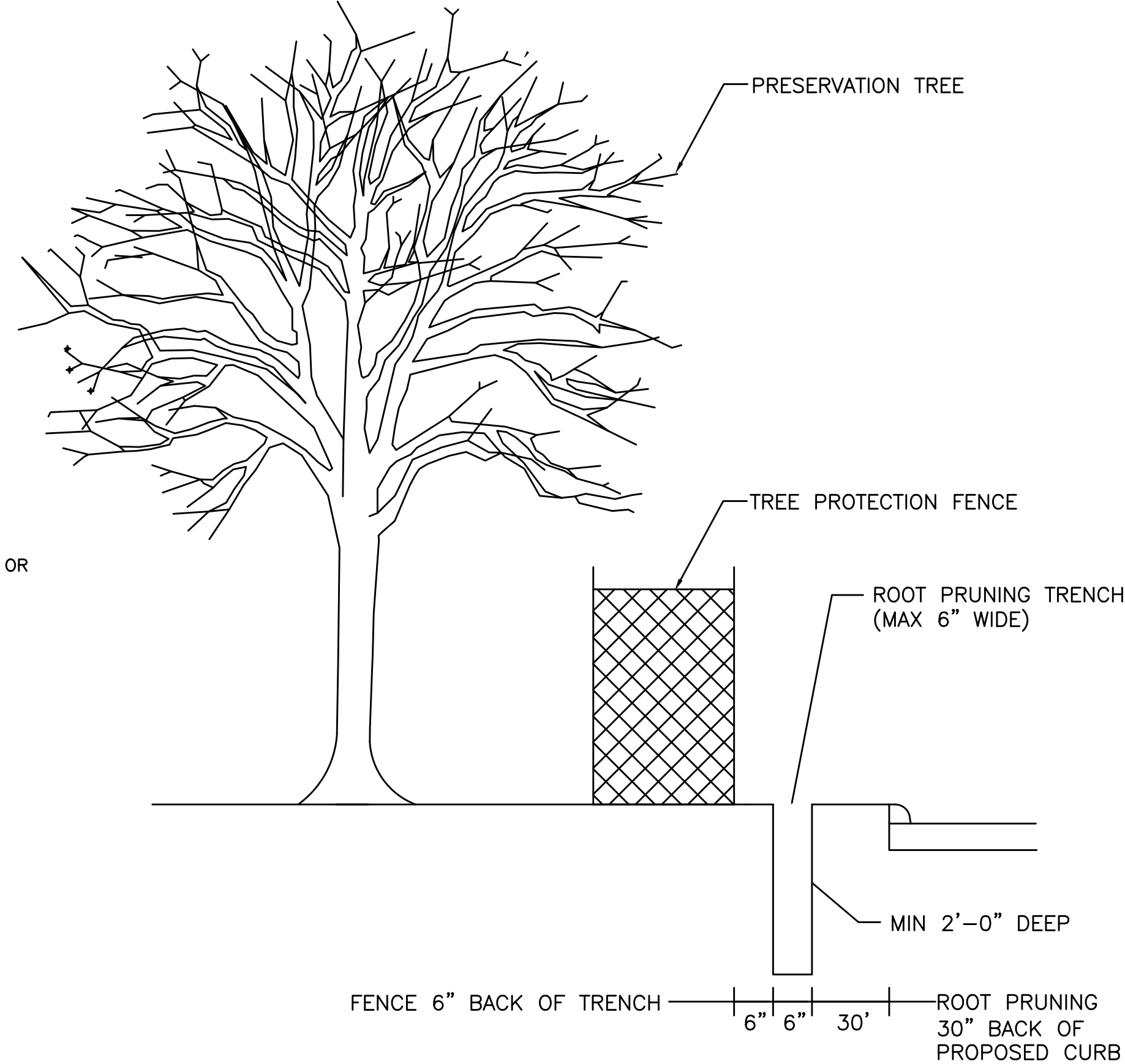
**ROOT PRUNE FOR WATER, SANITARY, OR STORM LINE**  
NOT TO SCALE



**ZERO CURB CUTBACK DETAIL  
EXTRA STEEL BEHIND CURB**  
NOT TO SCALE



**ZERO CURB CUTBACK DETAIL-PROFILE VIEW**  
NOT TO SCALE



**ROOT PRUNE FOR STREET-CURB & GUTTER - NO OCC**  
NOT TO SCALE

NO.	DESCRIPTION	DATE	DWN.	CHK.
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**C.N. Koehl**  
Urban Forestry, Inc.  
210 Stone Bush Ct. • Katy, Texas 77493  
281-391-0022 ckoehl@koehlurbanforestry.com  
APPROVED: *Craig N. Koehl* 10-24-2024

**HDR**  
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City of Hilshire Village, Texas  
Hilshire Green Drive  
Paving, Drainage & Utility Improvements

**TREE PROTECTION PLAN**  
SHEET 2 OF 2

Job No.: 10408611	Scale: HORZ : VERT : One Inch If above mark does not measure one inch, then this dwg. not to scale	SHEET <b>23</b> OF 23
Date: August, 2024		
Dwn By: N.B.		
Chkd By: C.N.K.		