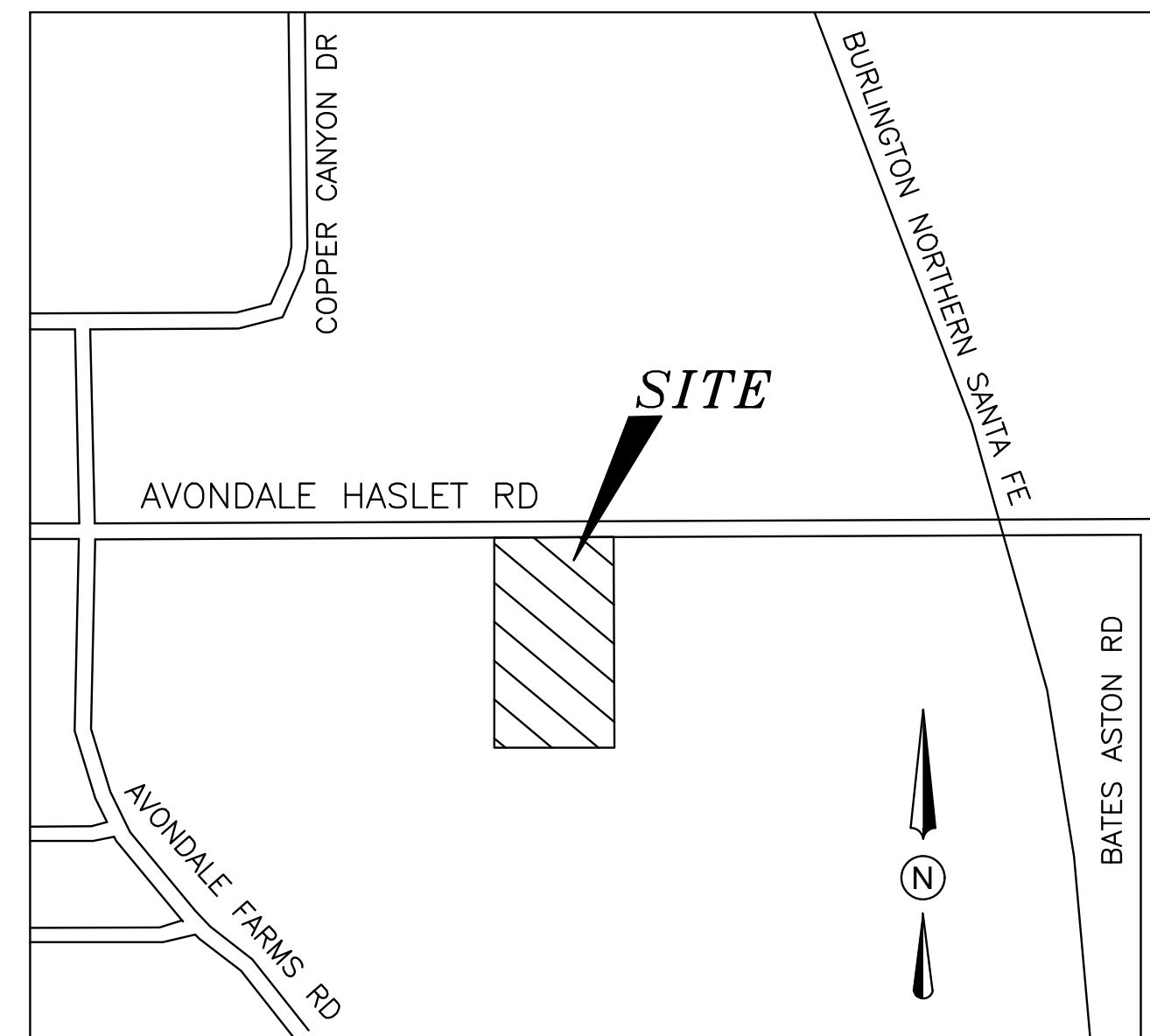


SITE DEVELOPMENT PLANS FOR SHERWIN WILLIAMS

2101 AVONDALE HASLET ROAD

0.932 ACRES SITUATED IN THE
ROAD VISTA CROSSROADS ADDITION BLOCK 2, LOT 4
CITY OF FORT WORTH TARRANT COUNTY, TEXAS 76052

PROJECT CONTACT LIST	
<p style="text-align: center;">ENGINEER TRIANGLE ENGINEERING LLC 1782 W MCDERMOTT DRIVE ALLEN, TEXAS 75013 CONTACT: JACK ZANGER TEL: 469-331-8566</p>	<p style="text-align: center;">OWNER/DEVELOPER FORT WORTH DEVELOPMENT GROUP, LLC 120 MARKET SQ., FLOOR 2, PINEHURST, NC 28374 CONTACT: GAVIN MELIA TEL: 910 724 6720</p>
<p style="text-align: center;">SURVEYOR TRAVERSE LAND SURVEYING LLC 14200 MIDWAY ROAD, SUITE 130 DALLAS, TX 75224 CONTACT: GRAYSON CEBALLOS TEL: 469-426-7339</p>	

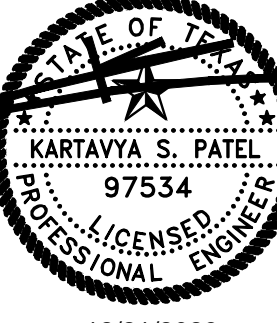


VICINITY MAP
N.T.S.

DRAWING SHEET INDEX	
SHEET NO.	DESCRIPTION
C-1.0	COVER SHEET
C-2.0	PLAT
C-3.0	SURVEY
C-4.0	SITE PLAN
C-4.1	SITE DETAILS
C-5.0	GRADING PLAN
C-6.0	PRE-DRAINAGE PLAN
C-6.1	POST-DRAINAGE PLAN
C-6.2	STORM SEWER PLAN AND PROFILE
C-6.3	STORM SEWER DETAILS
C-7.0	PAVING PLAN
C-7.1	PAVING DETAILS
C-8.0	UTILITY PLAN
C-8.1	UTILITY DETAILS
C-9.0	EROSION CONTROL PLAN
C-9.1	EROSION CONTROL DETAILS
L1	LANDSCAPE PLAN
L2	LANDSCAPE SPECIFICATIONS
L3	IRRIGATION PLAN
L4	IRRIGATION SPECIFICATIONS



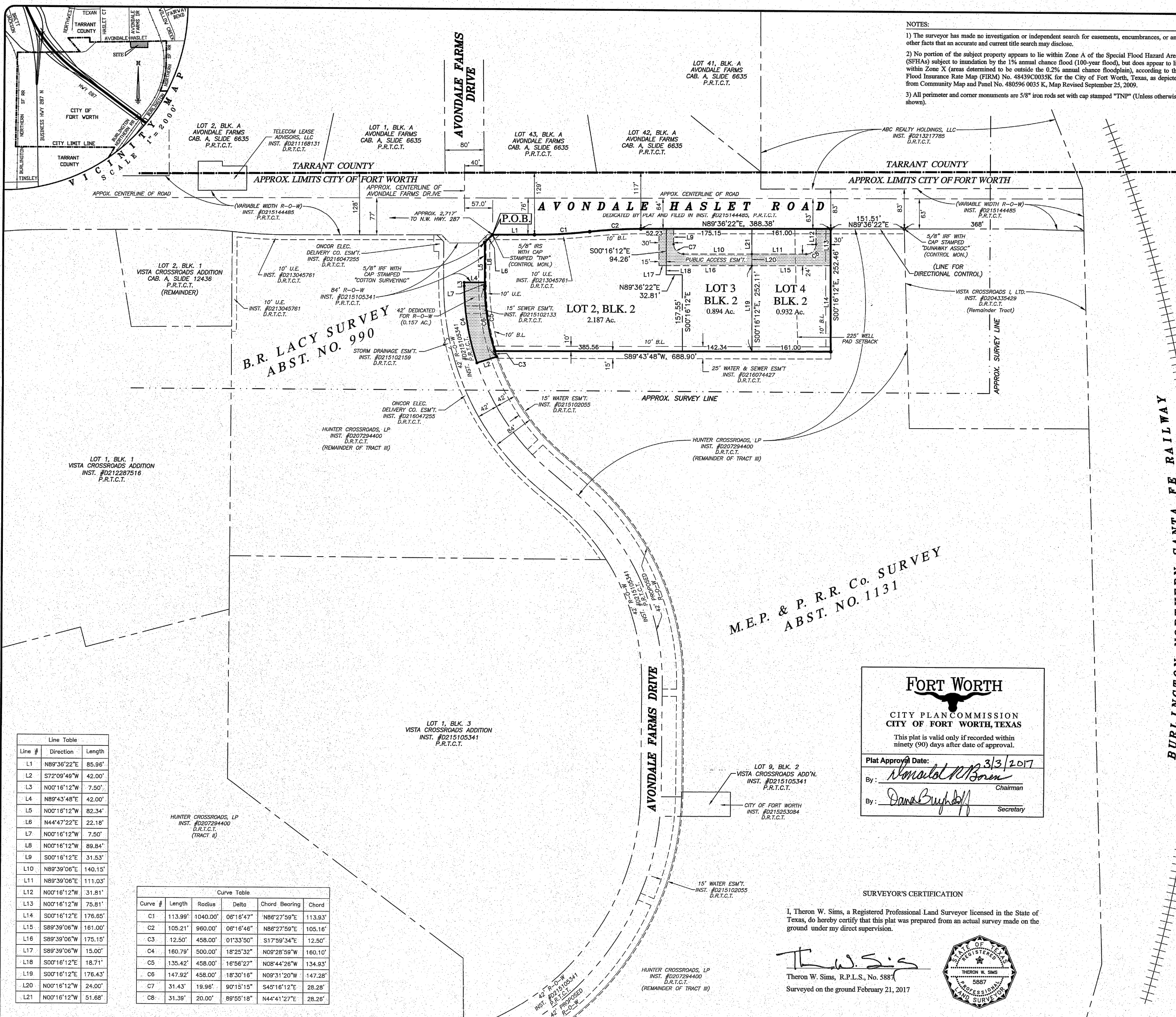
NO.	DATE	DESCRIPTION	BY
1	12-21-23	1ST SUBMITTAL	KP



COVER SHEET
SHERWIN WILLIAMS
2101 AVONDALE HASLET ROAD
VISTA CROSSROADS ADDITION BLOCK 2, LOT 4
CITY OF FORT WORTH
TARRANT COUNTY, TEXAS

DATE	PROJECT
12/21/23	049-23
P.E.	DESIGN
KP	JZ

SHEET #
C-1.0



Line Table

Line #	Direction	Length
L1	N89°36'22"E	85.96'
L2	S72°09'49"W	42.00'
L3	N00°16'12"W	7.50'
L4	N89°43'48"E	42.00'
L5	N00°16'12"W	82.34'
L6	N44°47'22"E	22.18'
L7	N00°16'12"W	7.50'
L8	N00°16'12"W	89.84'
L9	S00°16'12"E	31.53'
L10	N89°39'06"E	140.15'
L11	N89°39'06"E	111.03'
L12	N00°16'12"W	31.81'
L13	N00°16'12"W	75.81'
L14	S00°16'12"E	176.65'
L15	S89°39'06"W	161.00'
L16	S89°39'06"W	175.15'
L17	S89°39'06"W	15.00'
L18	S00°16'12"E	18.71'
L19	S00°16'12"E	176.43'
L20	N00°16'12"W	24.00'
L21	N00°16'12"W	51.68'

Curve Table

Curve #	Length	Radius	Delta	Chord Bearing	Chord
C1	113.99'	1040.00'	06°16'47"	N86°27'59"E	113.93'
C2	105.21'	960.00'	06°16'46"	N86°27'59"E	105.16'
C3	12.50'	458.00'	01°33'50"	S17°59'34"E	12.50'
C4	160.79'	500.00'	18°25'32"	N08°28'59"W	160.10'
C5	135.42'	458.00'	16°56'27"	N08°44'28"W	134.93'
C6	147.92'	458.00'	16°30'16"	N08°31'20"W	147.28'
C7	31.43'	19.96'	90°15'15"	S45°16'12"E	28.28'
C8	31.39'	20.00'	89°55'18"	N44°41'27"E	28.28'

NOTES:
 1) The surveyor has made no investigation or independent search for encumbrances, or any other facts that an accurate and current title search may disclose.
 2) No portion of the subject property appears to lie within Zone A of the Special Flood Hazard Areas (SFHA) subject to inundation by the 1% annual chance flood (100-year flood), but does appear to lie within Zone X (area determined to be outside the 0.2% annual chance floodplain), according to the Flood Insurance Rate Map (FIRM) No. 48439C003K for the City of Fort Worth, Texas, as depicted from Community Map and Panel No. 480596 0035 K, Map Revised September 25, 2009.
 3) All perimeter and corner monuments are 5/8" iron rods set with cap stamped "TNP" (Unless otherwise shown).

Site Drainage Study
 A site drainage study, showing conformance with the approved roadway drainage plan, may be required for any building permit will be issued on this site (a grading plan in some instances may be adequate.) If the site does not conform, then a drainage study may be required along with a CFA for any required drainage improvements and the current owner shall submit a letter to the Department of Transportation and Public Works stating awareness that a Site Drainage Study will be required before any permit is issued. The current owner will inform each buyer of the same.

Construction Prohibited Over Easements
 No permanent buildings or structures shall be constructed over any existing or planned water, sanitary sewer, drainage gas, electric, cable or other utility easement of any type.

Utility Easements
 Any public utility, including the City of Fort Worth, shall have the right to move and keep in place all or part of any building, fence, tree, shrub, other growth or improvement which in any way endangers or interferes with the construction, maintenance, or efficiency of its respective systems on any of the easements shown on the plat and they shall have the right at all times to ingress and egress upon said easements for the purpose of construction, reconstruction, inspection, repairing, maintaining, and adding to or removing all or part of its respective systems without the necessity of any type of proceeding, the permission of anyone.

Sidewalks
 Sidewalks are required adjacent to both sides of all public and private streets, in conformance with the Sidewalk Policy per "City Development Design Standards".

Private Maintenance
 The City of Fort Worth shall not be responsible for maintenance of private streets, drives, emergency access easements, recreation areas, open spaces and drainage facilities, and shall cover access to internally owned sewer harness the City of Fort Worth, Texas, from claim, damages and losses arising out of or from performance of the obligation of said owners set forth in this paragraph.

Building Permits
 No building permits shall be issued for any lot in this subdivision until an appropriate CFA or other acceptable provisions are made for the construction of any applicable water, sewer, storm drain, street light, sidewalk, or paving improvements, and approval is first obtained from the City of Fort Worth.

Parkway Permit
 Parkway improvements such as curb & gutter, pavement tie-in, drive approaches, sidewalks and drainage holes may be required at time of building permit issuance via a parkway permit.

Transportation Impact Fees
 The City of Fort Worth has an ordinance implementing the assessment and collection of transportation impact fees. The total amount assessed is established on the approval date of this plat application, based upon Schedule I of the impact fee ordinance in effect as of the date of the plat. The amount to be collected is determined under Schedule II of said ordinance, and is due on the date a building permit is issued.

Water / Wastewater Impact Fees
 The City of Fort Worth has an ordinance implementing the assessment and collection of water and wastewater impact fees. The total amount assessed is established on the filing date of this plat application, based upon Schedule I of the current impact fee ordinance. The amount to be collected is determined under Schedule II of said ordinance, and becomes effective on the date a building permit is issued, or on the connection date to the municipal water and/or wastewater system.

P.R.V. Required
 Private P.R.V.s will be required if water pressure exceeds 80 P.S.I.

Private Booster Pumps Required
 Private Booster Pumps required for proposed building with finish floor elevation requiring North Side 4 pressure plane for water service. In the absence of north side 4, buildings will have to install privately owned and maintained Booster Pump to enhance water pressure.

STATE OF TEXAS
 COUNTY OF TARRANT

WHEREAS Hunter Crossroads, LP, is the owner of 4.170 acres of land situated in the B.R. Lacy Survey, Abstract No. 990, City of Fort Worth, Tarrant County, Texas and being a portion of that certain remainder tract of land described in deed as Tract III to Hunter Crossroads, LP, as filed in County Clerk's No. (C.C.) #D207294400, Deed Records of Tarrant County, Texas (D.R.T.C.T.), and also being a portion of Tract 13, R.B. Bishop's Subdivision, an addition to Tarrant County, Texas, according to the plat recorded in Volume 63, Page 148, Plat Records of Tarrant County, Texas (P.R.T.C.T.) and being more particularly described by metes and bounds as follows:

BEGINNING at a 5/8 inch iron rod with cap stamped "TNP", set at a northwest corner of said Tract III remainder tract, also being the intersection of the south Right-of-Way (R-O-W) line of Avondale Haslet Road (variable width) dedicated by plat, according to the plat filed in Instrument #D215144485, P.R.T.C.T., with the northeast corner of the R-O-W line of Avondale Farms Drive (variable width) dedicated by plat, according to the plat filed in Instrument #D215105341, P.R.T.C.T.;

THENCE along the south R-O-W line of said Avondale Haslet Road and along a north line of said Tract III remainder tract, the following courses and distances;

N 89°36'22" E, a distance of 85.96 feet to a 5/8 inch iron rod with cap stamped "TNP", set at the beginning of a tangent curve to the left whose radius is 1040.00 feet and whose long chord bears N 86°27'59" E, a distance of 113.93 feet;

Along said curve in a northeasterly direction through a central angle of 06°16'47", an arc length of 113.99 feet to a 5/8 inch iron rod with cap stamped "TNP", set at the beginning of a reverse curve to the right whose radius is 960.00 feet and whose long chord bears N 86°27'59" E, a distance of 105.16 feet;

Along said curve in a northeasterly direction through a central angle of 06°16'46", an arc length of 105.21 feet to a 5/8 inch iron rod set with cap stamped "TNP";

N 89°36'22" E, a distance of 388.38 feet to a 5/8 inch iron rod with cap stamped "TNP", set, from which a 5/8 inch iron rod found with cap stamped "Dunaway Assoc.", at a northeast corner of said Tract III remainder tract, also being a northwest corner of a remainder tract of land conveyed to Vista Crossroads L, LTD, according to the deed filed in Instrument No. D204335429, D.R.T.C.T., bears N 89°36'22" E, a distance of 151.51 feet;

THENCE over and across said Tract III remainder tract, the following courses and distances;

S 00°16'12" E, a distance of 252.46 feet to a 5/8 inch iron rod set with cap stamped "TNP";

S 89°43'48" W, a distance of 688.90 feet to a 5/8 inch iron rod set with cap stamped "TNP", at the beginning of a non-tangent curve to the left whose radius is 458.00 feet and whose long chord bears S 17°59'34" E, a distance of 12.50 feet;

Along said curve in a southeasterly direction through a central angle of 01°33'50", an arc length of 12.50 feet to a 5/8 inch iron rod with cap stamped "TNP", set;

S 72°09'49" W, a distance of 42.00 feet to a 5/8 inch iron rod with cap stamped "TNP", set in the east R-O-W line of said Avondale Farms Drive (Inst. #D215105341, P.R.T.C.T.), and being the beginning of a non-tangent curve to the right whose radius is 500.00 feet and whose long chord bears N 09°25'59" W, a distance of 160.10 feet;

Along said curve and said east R-O-W line in a northwesterly direction through a central angle of 18°25'32", an arc length of 160.79 feet to a 5/8 inch iron rod with cap stamped "TNP", set;

THENCE continuing along said R-O-W line, the following courses and distance;

N 00°16'12" W, a distance of 7.50 feet to a 5/8 inch iron rod with cap stamped "TNP", set;

N 89°43'48" E, a distance of 42.00 feet to a 5/8 inch iron rod with cap stamped "TNP", set;

N 00°16'12" W, a distance of 82.34 feet to a 5/8 inch iron rod found with cap stamped "Cotton Surveying";

N 44°47'22" E, continuing along said R-O-W line, a distance of 22.18 feet to the POINT OF BEGINNING and containing 181,643 square feet or 4.170 acres of land.

NOW, THEREFORE KNOW ALL MEN BY THESE PRESENTS THAT Hunter Crossroads, LP, does hereby adopt this plat as:

**LOTS 2, 3 & 4, BLOCK 2
 VISTA CROSSROADS ADDITION**

An addition to the City of Fort Worth, Tarrant County, Texas and does hereby dedicate to the public's use forever the easements and rights-of-way shown hereon.

WITNESS my hand on this 20th day of February, 2017.

By: *Scott Rohman*
 Scott Rohman,
 as Manager of the General Partner of Hunter Crossroads, LP

FORT WORTH
 CITY PLAN COMMISSION
 CITY OF FORT WORTH, TEXAS

This plat is valid only if recorded within ninety (90) days after date of approval.

Plat Approval Date: 3/3/2017
 By: *Donald R. Brown* Chairman
 By: *Dana Buehler* Secretary

SURVEYOR'S CERTIFICATION

I, Theron W. Sims, a Registered Professional Land Surveyor licensed in the State of Texas, do hereby certify that this plat was prepared from an actual survey made on the ground under my direct supervision.

Theron W. Sims
 Theron W. Sims, R.P.L.S., No. 5887
 Surveyed on the ground February 21, 2017

BASIS OF BEARINGS:
 Bearings of lines shown hereon refer to Grid North of the Texas Coordinate System of 1983 (North Central Zone; NAD83/CORS96) as derived locally from Western Data Systems Continuously Operating Reference Stations (CORS) via Real Time Kinematic (RTK) methods. An average Combination Factor of 1.00015 was used to scale grid coordinates and distance to surface.

teague nall & perkins
 5237 N. Riverside Drive, Suite 100
 Fort Worth, Texas 76137
 817.336.3773 ph 817.332.7356 fx
 www.tnplc.com / TBPLS Registration No. 100116-00

OWNER:
 Hunter Crossroads, LP
 3890 W. Northwest Hwy., Suite 100
 Dallas, TX 75220

THIS PLAT FILED IN C.C. # _____ DATE: / / 2017.

FINAL PLAT OF
**LOTS 2, 3 & 4, BLOCK 2
 VISTA CROSSROADS ADDITION**

An addition to the City of Fort Worth, Tarrant County, Texas, situated in the B.R. Lacy Survey, Abstract No. 990, City of Fort Worth, Tarrant County, Texas and being a portion of Tract 13, R.B. Bishop's Subdivision, an addition to Tarrant County, Texas, according to the plat recorded in Volume 63, Page 148, Plat Records of Tarrant County, Texas and containing 4.170 acres of land total.

DATE: 2/20/2017
 FP 15-007
 Ref. PP 14-053

SHERWIN WILLIAMS
 2101 AVONDALE HASLET ROAD
 VISTA CROSSROADS ADDITION BLOCK 2, LOT 4
 CITY OF FORT WORTH
 TARRANT COUNTY, TEXAS

TX PE FIRM #11525

TRANGLE ENGINEERING LLC
 T: 869.331.8566 F: 869.213.7145 E: info@trangle-eng.com
 W: trangle-eng.com | 101782 W. McDermott Drive, TX 75013
 Planning | Civil Engineering | Construction Management

NO.	DATE	DESCRIPTION
1	12-21-23	1ST SUBMITTAL

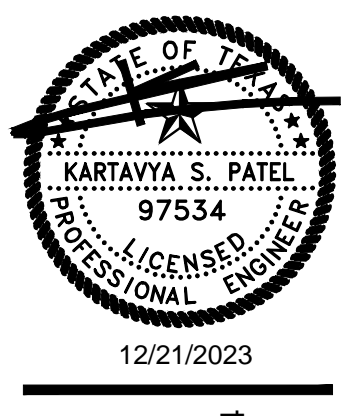
DATE: 12/21/23
 PROJECT: 049-23
 P.E.: DESIGN
 KP: JZ

SHEET #
 C-2.0

HTR 14350



NO.	DATE	DESCRIPTION	BY
1	12/21/23	1ST SUBMITTAL	KP



SURVEY
 SHERWIN WILLIAMS
 2101 AVONDALE HASLETT ROAD
 VISTA CROSSROADS ADDITION BLOCK 2, LOT 4
 CITY OF FORT WORTH
 TARRANT COUNTY, TEXAS

DATE	PROJECT
12/21/23	049-23
P.E.	DESIGN
KP	JZ

SHEET #
C-3.0

LAND DESCRIPTION

Tract 1:
Being Lot 4, Block 2, of Vista Crossroads Addition, an addition to the City of Fort Worth, Tarrant County, Texas, according to the plat thereof recorded in Instrument No. D217048919, Official Public Records, Tarrant County, Texas.

SURVEYOR'S CERTIFICATION

To: Fort Worth Development Group, LLC, a North Carolina limited liability company, HUNTER CROSSROADS, LP, a Texas limited partnership, and First American Title Insurance Company

This is to certify that this map or plat and the survey on which it is based were made in accordance with the 2021 Minimum Standard Detail Requirements for ALTA/NSPS Land Title Surveys, jointly established and adopted by ALTA and NSPS. ALTA Items: 1-5, 6(a), 6(b), 8, 9, 11(a), 13, 14, 17, and 18. The fieldwork was completed on June 27, 2023.

Date of Plat or Map: June 28, 2023
Title Commitment provided by: First American Title Insurance Company
G.F. No. 1002-384297-RTT
Date:

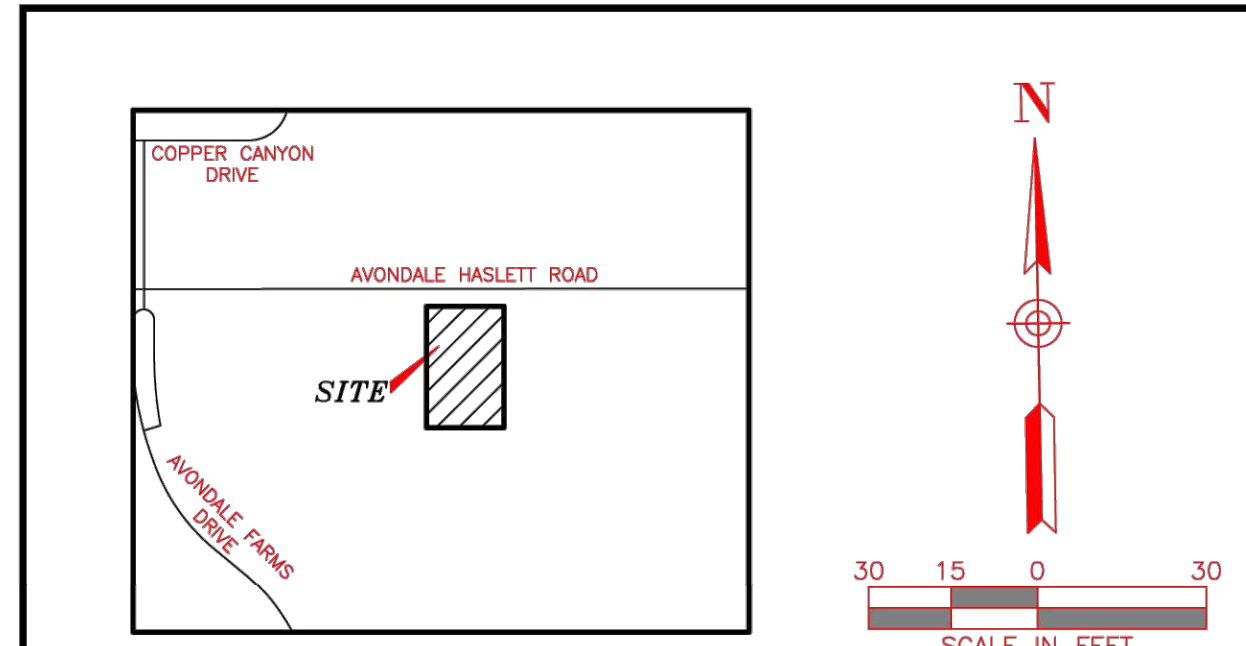
David F. McCullah
Registered Public Land Surveyor
Texas Registration No. 4023

LEGEND

—	BOUNDARY LINE
- - - -	ADJOINER BOUNDARY LINE
- · - · -	EASEMENT LINE (AS NOTED)
W	WATER LINE
-SAND-	SANITARY SEWER LINE
-SD-	STORM DRAIN LINE (AS NOTED)
-OHE-	OVERHEAD ELECTRIC LINE
-	CHAIN LINK FENCE
W	WOOD FENCE
IR	5/8" IRON ROD SET WITH A YELLOW CAP STAMPED "TRAVERSE LS"
●	FOUND IRON ROD (AS NOTED)
⊗	"X" CUT FOUND
⊙	"X" CUT SET
WM	WATER METER
FM	FIRE HYDRANT
WV	WATER VALVE
CV	IRRIGATION CONTROL VALVE
OS	SANITARY SEWER MAN HOLE
CO	SEWER CLEAN OUT
□	VAULT
□	TRANSFORMER
□	ELECTRIC VAULT
□	ELECTRIC BOX
□	ELECTRIC METER
□	CABLE VAULT
□	TELEPHONE JUNCTION BOX
□	TRAFFIC SIGNAL LIGHT
□	TRAFFIC SIGN
□	STORM MAN HOLE
□	STORM MAN HOLE
□	LIGHT POLE
□	POWER POLE
□	GAS METER
□	AIR CONDITIONER UNIT
□	BENCH MARK
CM	CONTROL MONUMENT
O.P.R.T.C.T.	OFFICIAL PUBLIC RECORDS TARRANT COUNTY, TEXAS
D.R.T.C.T.	DEED RECORDS TARRANT COUNTY, TEXAS

TITLE NOTES

- Rights, if any, of third parties with respect to any portion of the subject property lying within the boundaries of a public or private road. (May be amended or deleted upon approval of survey.) (Not survey related)
- Rights of parties in possession and rights of tenants under any unrecorded leases or rental agreements. (May be amended or deleted upon execution of satisfactory affidavit with respect to parties in possession and tenants at closing.) (Not survey related)
- Easement granted by Vista Crossroads L, Ltd., to the City of Fort Worth, filed 10/25/2007, recorded in ccf# D207382624, Real Property Records, Tarrant County, Texas. (Does not affect the subject property)
- Easement granted by Hunter Crossroads, LP, to Hollis R. Sullivan, Inc., filed 10/16/2008, recorded in ccf# D208395432, Real Property Records, Tarrant County, Texas. Affected by Assignment filed 06/02/2009, recorded in ccf# D209146058, Real Property Records, Tarrant County, Texas. (Affects the subject property, blanket in nature)
- Easement granted by Hunter Crossroads, LP, to XTO Energy Inc., filed 02/09/2011, recorded in ccf# D211032410, Real Property Records, Tarrant County, Texas. (Affects subject property, blanket in nature)
- Easement granted by Hunter Crossroads, LP, to the City of Fort Worth, filed 09/06/2012, recorded in ccf# D212218792, Real Property Records, Tarrant County, Texas. (Does not affect the subject property)
- Terms, provisions, conditions, and easements contained in Public Utility Easement, filed 02/22/2013, recorded in ccf# D213045761, Real Property Records, Tarrant County, Texas. (Affects the subject property, as shown on survey)
- Terms, provisions, conditions, and easements contained in Development and Easement Agreement, filed 07/02/2015, recorded in ccf# D215144097, Real Property Records, Tarrant County, Texas. (Does not affect the subject property)
- Easement granted by Hunter Crossroads, LP, to the City of Fort Worth, filed 04/12/2016, recorded in ccf# D216074427, Real Property Records, Tarrant County, Texas. (Affects subject property, as shown on survey)
- The following easements and/or building lines, as shown on plat recorded in filed 03/03/2017, recorded in ccf# D217048919, Plat Records, Tarrant County, Texas:
 - Portion of a 225' well pad setback;
 - 10' building line;
 - Variable width public access easement. (Affects subject property, as shown on survey)
- Title to all coal, lignite, oil, gas and other minerals in, under and that may be produced from the land, together with all rights, privileges, and immunities relating thereto, of all such interest, to the extent not previously reserved or conveyed being described in instrument filed 04/11/2001, recorded in Volume 14821, Page 416, Real Property Records, Tarrant County, Texas, as corrected and refilled 05/21/2001, recorded in Volume 14896, Page 470, Real Property Records, Tarrant County, Texas. Company makes no representation as to the present ownership of any such interests. (Not survey related)
- Mineral lease together with all rights, privileges and immunities incident thereto, to Calho Oil Company, from Lois Price Witscherke, et al, described in instrument filed 10/03/2001, recorded in Volume 15171, Page 318, Real Property Records, Tarrant County, Texas. Company makes no representation as to the present ownership of any such interests. (Not survey related)



VICINITY MAP
NOT TO SCALE

TABLE A ITEMS

- Monuments placed (or a reference monument or witness to the corner) at all major corners of the boundary of the surveyed property, unless already marked or referenced by existing monuments or witnesses in close proximity to the corner. (As shown on survey)
- Address(es) of the surveyed property if disclosed in documents provided to or obtained by the surveyor, or observed while conducting the fieldwork. (As shown on survey)
- Flood zone classification (with proper annotation based on federal Flood Insurance Rate Maps or the state or local equivalent) depicted by scaled map location and graphic plotting only. (As shown on survey)
- Gross land area (and other areas if specified by the client). (As shown on survey)
- Vertical relief with the source of information (e.g., ground survey, aerial map), contour interval, datum, with originating benchmark, when appropriate. (As shown on survey)
- (a) If the current zoning classification, setback requirements, the height and floor space area restrictions, and parking requirements specific to the surveyed property are set forth in a zoning report or letter provided to the surveyor by the client or the client's designated representative, list the above items on the plat or map and identify the date and source of the report or letter. (Not provided)
- (b) If the zoning setback requirements specific to the surveyed property are set forth in a zoning report or letter provided to the surveyor by the client or the client's designated representative, and if those requirements do not require an interpretation by the surveyor, graphically depict those requirements on the plat or map and identify the date and source of the report or letter. (As shown on survey)
- Substantial features observed in the process of conducting the fieldwork (in addition to the improvements and features required pursuant to Section 5 above) (e.g., parking lots, billboards, signs, swimming pools, landscaped areas, substantial areas of refuse). (As shown on survey)
- Number and type (e.g., disabled, motorcycle, regular, and other marked specialized types) of clearly identifiable parking spaces on surface parking areas and lots. (As shown on survey)
- (No parking spaces observed at the time of the survey.)
- Evidence of underground utilities existing on or serving the surveyed property (in addition to the observed evidence of utilities required pursuant to Section 5.E.iv.) as determined by:
 - (a) plans and/or reports provided by client (with reference as to the sources of information) (All underground utilities shown hereon were taken from existing plans, none of the underground utilities shown hereon have been field verified by the surveyor.)
 - (b) markings coordinated by the surveyor pursuant to a private utility locate request.
- Names of adjoining owners according to current tax records. If more than one owner, identify the first owner's name listed in the tax records followed by "et al." (As shown on survey)
- As specified by the client, distance to the nearest intersecting street. (As shown on survey)
- Proposed changes in street right of way lines, if such information is made available to the surveyor by the controlling jurisdiction. Evidence of recent street or sidewalk construction or repairs observed in the process of conducting the fieldwork. (No observed street intersection changes noticeable at time of the survey.)
- Pursuant to Sections 5 and 6 (and applicable selected Table A items, excluding Table A item 1), include as part of the survey any plottable offsite (i.e., appurtenant) easements disclosed in documents provided to or obtained by the surveyor. (As shown on survey)

TITLE NOTES

SCHEDULE B EXCEPTIONS FROM COVERAGE

- Commitment No. and G.F. No.: 1002-384297-RTT
- In addition to the Exclusions and Conditions and Stipulations, your Policy will not cover loss, costs, attorney's fees, and expenses resulting from:
- The following restrictive covenants of record itemized below (We must either insert specific recording data or delete this exception):
 - Restrictive covenants described in instrument filed 10/03/2017, recorded in ccf# D217230160, Real Property Records, Tarrant County, Texas. Any covenant, condition or restriction indicating a preference, limitation or discrimination based on race, color, religion, sex, handicap, familial status, or national origin to the extent such covenants, conditions or restrictions violate 42 USC 3604(c), is deleted.
 - Any discrepancies, conflicts, or shortages in area or boundary lines, or any encroachments or protrusions, or any overlapping of improvements. (Not survey related)
 - Homestead or community property or survivorship rights, if any, of any spouse of any insured. (Applies to the Owner's Policy only.) (Not survey related)
 - Any titles or rights asserted by anyone, including, but not limited to, persons, the public, corporations, governments or other entities,
 - a. to tidelands, or lands comprising the shores or beds of navigable or perennial rivers and streams, lakes, bays, gulfs or oceans, or
 - b. to lands beyond the line of the harbor or bulkhead lines as established or changed by any government, or
 - c. to filled-in lands, or artificial islands, or
 - d. to statutory water rights, including riparian rights, or
 - e. to the area extending from the line of mean low tide to the line of vegetation, or the rights of access to that area or easement along and across that area. (Applies to the Owner's Policy only.) (Not survey related)
 - Standby fees, taxes and assessments by any taxing authority for the year 2023, and subsequent years; and subsequent taxes and assessments by any taxing authority for prior years due to change in land usage or ownership, but not those taxes or assessments for prior years because of an exemption granted to a previous owner of the property under Section 11.13, Texas Tax Code, or because of improvements not assessed for a previous tax year. (If Texas Short Form Residential Loan Policy of Title Insurance (T-2R) is issued, that policy will substitute "which become due and payable subsequent to Date of Policy" in lieu of "for the year 2023 and subsequent years.") (Not survey related)

GENERAL NOTES

- All underground utilities shown hereon were taken from existing plans, none of the underground utilities shown hereon have been field verified by the surveyor.
- The Basis of Bearings is from the Texas State Plane Coordinate System, NAD83, North Central Zone as derived from GPS observations using the Allterra RTK Network and adjusted to surface using a surface scale factor of 1.00012.

FLOOD NOTES

No portion of the subject property shown hereon lies within the 100 year flood hazard area according to the Flood Insurance Rate Map, Community Panel No. 48439C0035L, dated March 21, 2019. The subject property is located in the area designated as Zone "X", (areas determined to be outside the 0.2% annual chance floodplain).

NO.	DATE	DESCRIPTION	BY

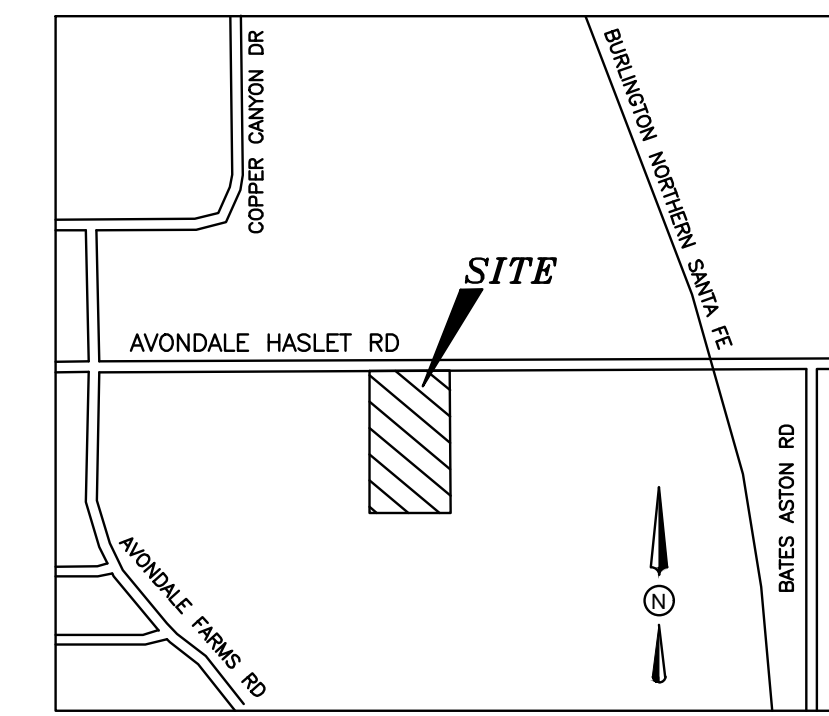
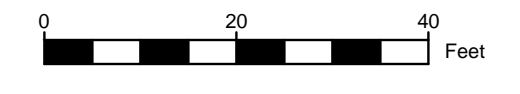
ALTA/NSPS LAND TITLE SURVEY

LOT 4, BLOCK 2,
 VISTA CROSSROADS ADDITION
 B.R. LACY SURVEY, ABSTRACT NO. 990
 CITY OF FORT WORTH, TARRANT COUNTY, TEXAS

TRAVERSE
 LAND SURVEYING LLC
 14200 Midway Road, Suite 130, Dallas, TX 75224 | T: 469.784.9321
 W: TraverseLandSurveying.com | Texas Firm No. 10194631

Surveying | Construction Staking | Platting

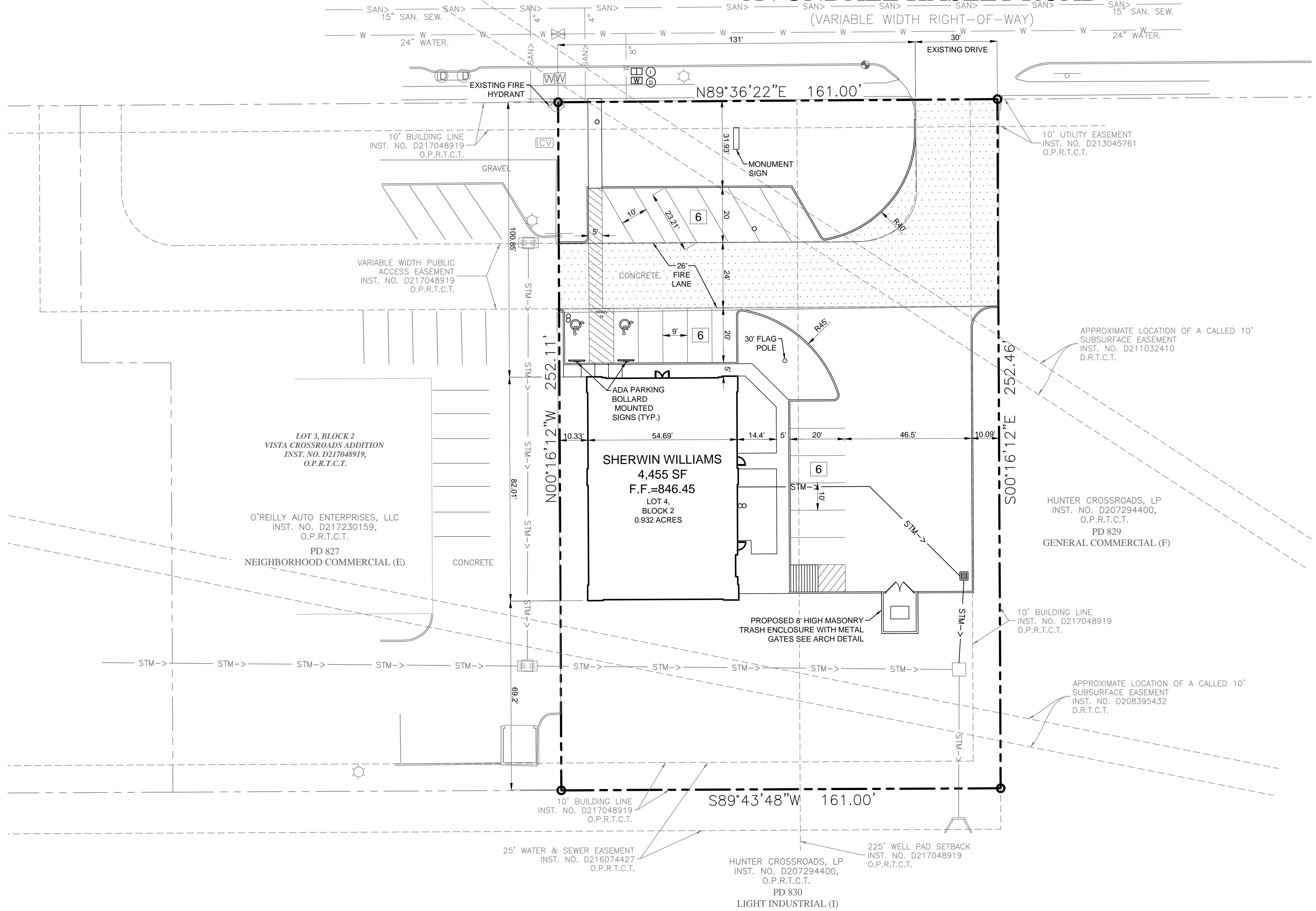
DRAWN	CHECK	DATE	SCALE	PROJECT NO.	SHEET NO.
TD	DM	06/28/2023	1" = 30'	TR-59-23	1



VICINITY MAP
N.T.S.

AVONDALE HASLET ROAD

(VARIABLE WIDTH RIGHT-OF-WAY)



SITE GENERAL NOTES

1. ALL CONSTRUCTION SHALL BE IN STRICT ACCORDANCE WITH THE CITY OR LOCAL JURISDICTION STANDARDS.
2. THE LOCATION OF UNDERGROUND UTILITIES INDICATED ON THE PLANS IS TAKEN FROM AS-BUILTS, UTILITY PLANS OR SURVEY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAKE ARRANGEMENTS WITH THE OWNERS OF SUCH UNDERGROUND UTILITIES PRIOR TO WORKING IN THE AREA TO CONFIRM THEIR EXACT LOCATION AND TO DETERMINE WHETHER ANY ADDITIONAL UTILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT. THE CONTRACTOR SHALL PRESERVE AND PROTECT ALL UNDERGROUND UTILITIES. IF EXISTING UNDERGROUND UTILITIES ARE DAMAGED, THE CONTRACTOR WILL BE RESPONSIBLE FOR THE COST OF REPAIRING THE UTILITY.
3. WHERE EXISTING UTILITIES OR SERVICE LINES ARE CUT, BROKEN OR DAMAGED, THE CONTRACTOR SHALL REPLACE OR REPAIR THE UTILITIES OR SERVICE LINES WITH THE SAME TYPE OF ORIGINAL MATERIAL AND CONSTRUCTION, OR BETTER, UNLESS OTHERWISE SHOWN OR NOTED ON THE PLANS, AT HIS OWN COST AND EXPENSE. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER AT ONCE OF ANY CONFLICTS WITH UTILITIES.
4. ALL EXCAVATIONS, TRENCHING AND SHORING OPERATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE U. S. DEPARTMENT OF LABOR, OSHA, CONSTRUCTION SAFETY AND HEALTH REGULATIONS AND ANY AMENDMENTS THERETO.
5. THE CONTRACTOR SHALL RESTORE ALL AREAS DISTURBED BY CONSTRUCTION TO ORIGINAL CONDITION OR BETTER. RESTORED AREAS INCLUDE, BUT ARE NOT LIMITED TO TRENCH BACKFILL, SIDE SLOPES, FENCES, DRAINAGE DITCHES, DRIVEWAYS, PRIVATE YARDS AND ROADWAYS.
6. ANY CHANGES NEEDED AFTER CONSTRUCTION PLANS HAVE BEEN RELEASED, SHALL BE APPROVED BY THE CITY ENGINEER. THESE CHANGES MUST BE RECEIVED IN WRITING.
7. THE CONTRACTOR SHALL PROVIDE "RED LINED" MARKED PRINTS TO THE ENGINEER PRIOR TO FINAL INSPECTION INDICATING ALL CONSTRUCTION WHICH DEVIATED FROM THE PLANS OR WAS CONSTRUCTED IN ADDITION TO THAT INDICATED ON THE PLANS.
8. ALL CURB SHALL BE 10' OR 2' UNLESS OTHERWISE NOTED ON THE SITE PLAN.
9. FIRE LANE SHALL BE CONSTRUCTED OF CONCRETE OR ASPHALT ABLE TO WITHSTAND AN IMPOSED LOAD OF 85,000 LBS.
10. THERE SHALL BE NO OVERHEAD OBSTRUCTIONS OF LESS THAN 14' OVER THE FIRE LANE.
11. FIRE LANE SHALL BE MARKED "FIRE LANE - TOW-AWAY ZONE."

COMMERCIAL SITE DATA SUMMARY TABLE	
GROSS SITE ACREAGE:	0.932 ACRES OR 40,598 S.F.
EXISTING ZONING:	PD 827 NEIGHBORHOOD COMMERCIAL (E)
PROPOSED ZONING:	PD 827 NEIGHBORHOOD COMMERCIAL (E)
PROPOSED USE:	RETAIL
BUILDING AREA:	4,455 S.F.
NUMBER OF STORIES:	1
BUILDING HEIGHT:	26'
FACADE:	STUCCO
PARKING REQUIRED:	18 PARKING SPACES 4 PER 1000 FT. SF
REGULAR PARKING PROVIDED:	16 PARKING SPACES
HANDICAP PARKING REQUIRED:	1 SPACE (1 VAN ACCESSIBLE)
HANDICAP PARKING PROVIDED:	2 SPACE (1 VAN ACCESSIBLE)
TOTAL PARKING PROVIDED:	18 PARKING SPACES
IMPERVIOUS COVERAGE:	20,477 S.F. OR 50.43%
PERVIOUS/LANDSCAPE AREA:	20,121 S.F. OR 49.57%
ZONING REQUIREMENTS GC	REQUIRED PROVIDED
FRONT YARD SETBACK	10' 10'
SIDE YARD SETBACK	0' 0'
REAR YARD SETBACK	10' 10'
MAXIMUM IMPERVIOUS COVER	85% 49%

NOTES
 THIS PROJECT WILL COMPLY WITH SECTION 6.301, LANDSCAPING.
 THIS PROJECT WILL COMPLY WITH SECTION 6.302, URBAN FORESTRY.
 ALL SIGNAGE WILL CONFORM TO ARTICLE 4, SIGNS.
 ALL PROVIDED LIGHTING WILL CONFORM TO THE LIGHTING CODE.

PROJECT CONTACT LIST	
ENGINEER TRIANGLE ENGINEERING LLC 1782 W MCDERMOTT DRIVE ALLEN, TEXAS 75013 CONTACT: JACK ZANGER TEL: 469-331-8566	OWNER/DEVELOPER FORT WORTH DEVELOPMENT GROUP, LLC 120 MARKET SQ., FLOOR 2, PINEHURST, NC 28374 CONTACT: GAVIN MELIA TEL: 910 724 6720
SURVEYOR TRAVERSE LAND SURVEYING LLC 14200 MIDWAY ROAD, SUITE 130 DALLAS, TX 75224 CONTACT: GRAYSON CEBALLOS TEL: 469-426-7339	

WATER METER & SANITARY SEWER SCHEDULE				
ID	TYPE	SIZE	NO.	SAN. SEW.
(D)	DOM.	1"	1	4"
(I)	IRR.	1"	1	N/A

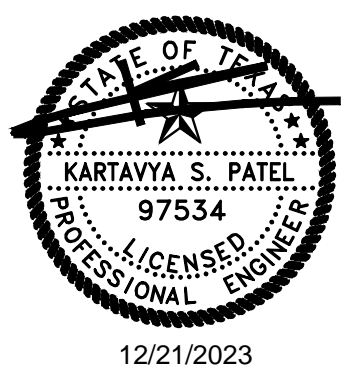
EASEMENT/SETBACK LEGEND	
BUILDING SET BACK	B.S.
LANDSCAPE SETBACK	L.S.
WATER EASEMENT	W.E.
UTILITY EASEMENT	U.E.

EXISTING LEGEND	
--- BOUNDARY LINE	WATER VALVE
- - - ADJOINER BOUNDARY LINE	TRAFFIC SIGNAL BOX
- - - EASEMENT LINE (AS NOTED)	GAS SIGN MARKER
--- WATER LINE	WATER METER
--- SANITARY SEWER LINE	ELECTRIC PEDESTAL
--- STORM DRAIN LINE (AS NOTED)	TELEPHONE MANHOLE
--- OVERHEAD ELECTRIC LINE	STORM MAN HOLE
--- GAS LINE	LIGHT POLE
--- UNDERGROUND FIBER OPTIC LINE	POWER POLE
--- SIGN	BENCH MARK
--- SET IRON ROD (AS NOTED)	CONTROL MONUMENT
--- FOUND IRON ROD (AS NOTED)	SANITARY SEWER CLEANOUT
--- "X" CUT FOUND	OFFICIAL PUBLIC RECORDS
--- "X" CUT SET	BOWIE COUNTY, TEXAS
--- FIRE HYDRANT	D.R.B.C.T. DEED RECORDS
--- SANITARY SEWER MAN HOLE	BOWIE COUNTY, TEXAS
	UNDERGROUND UTILITIES (SUE)



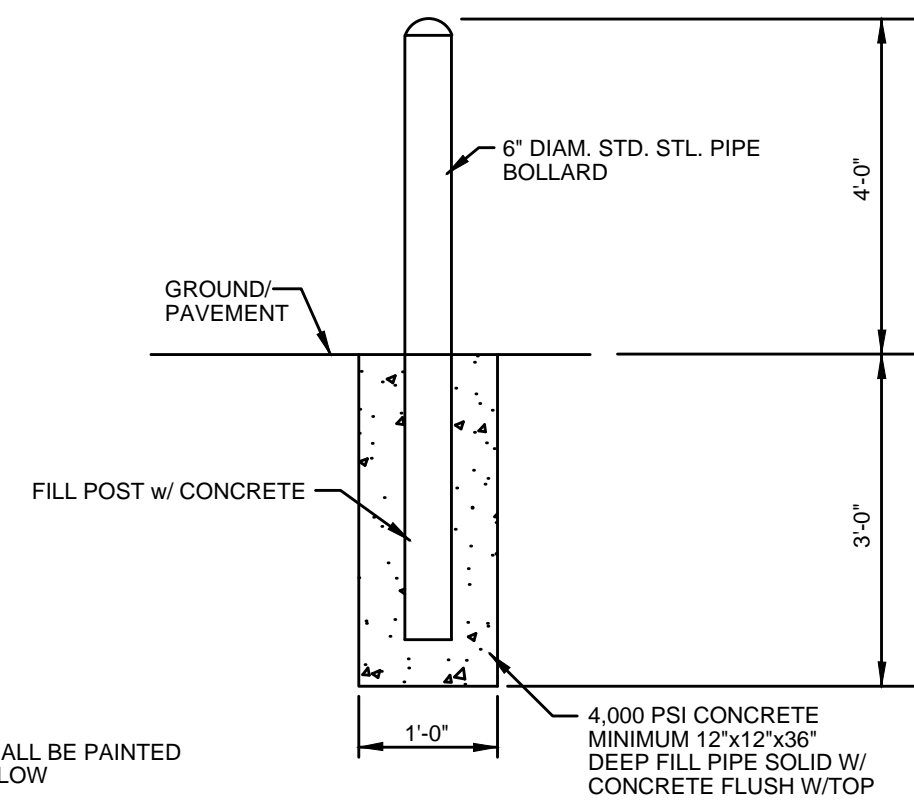
TX PE FIRM #11525
TRIANGLE ENGINEERING LLC
 T: 469.331.8566 | F: 469.213.7145 | E: info@triangle-eng.com
 W: triangle-eng.com | O: 1782 W. McDermott Drive, TX 75013
 Planning | Civil Engineering | Construction Management

NO.	DATE	DESCRIPTION	BY
1	12-21-23	1ST SUBMITTAL	KP

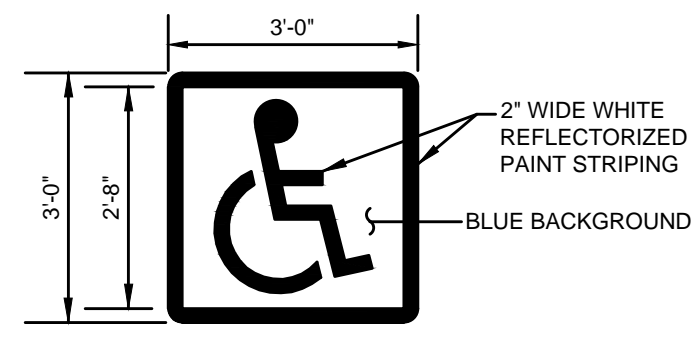


SITE PLAN
 SHERWIN WILLIAMS
 2101 AVONDALE HASLET ROAD
 VISTA CROSSROADS ADDITION BLOCK 2, LOT 4
 CITY OF FORT WORTH
 TARRANT COUNTY, TEXAS

DATE	PROJECT
12/21/23	049-23
P.E.	DESIGN
KP	JZ
SHEET #	
C-4.0	

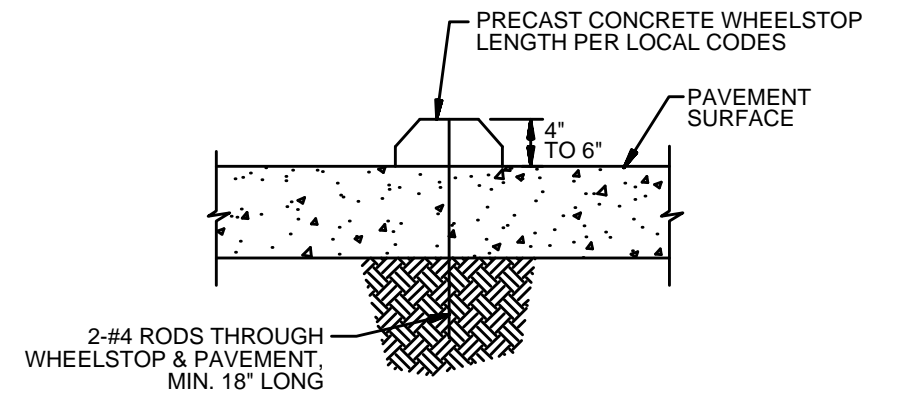


BOLLARD DETAIL
N.T.S.

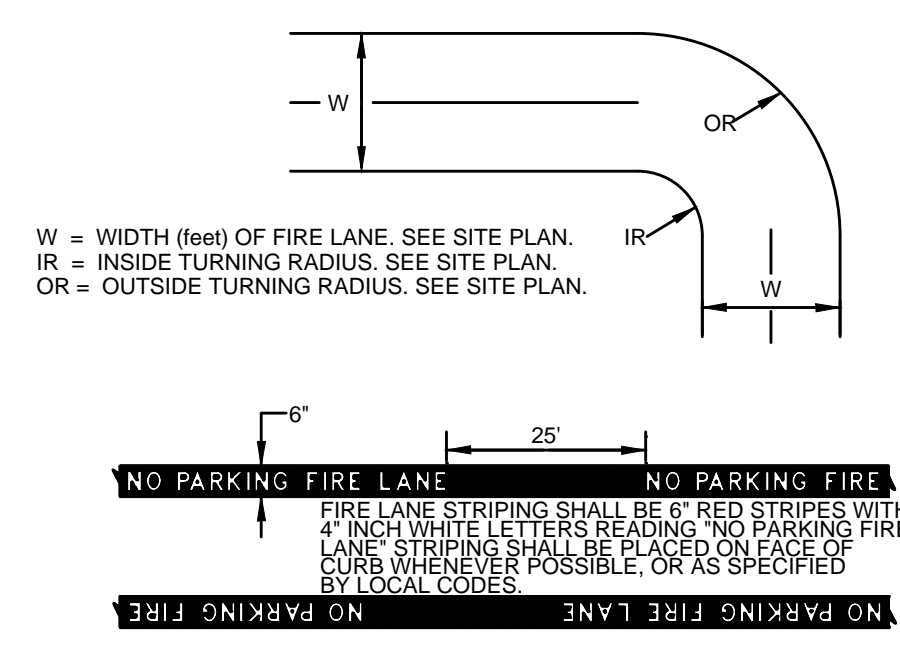


- NOTES:**
1. STENCIL ONE SYMBOL ONTO PARKING SURFACE IN EACH ACCESSIBLE STALL.
 2. LOCATE PER ACCESSIBLE PARKING STALL DETAIL(S).
 3. ALL LINES 2" WIDE PAINTED ON WHITE ON BLUE BACKGROUND.

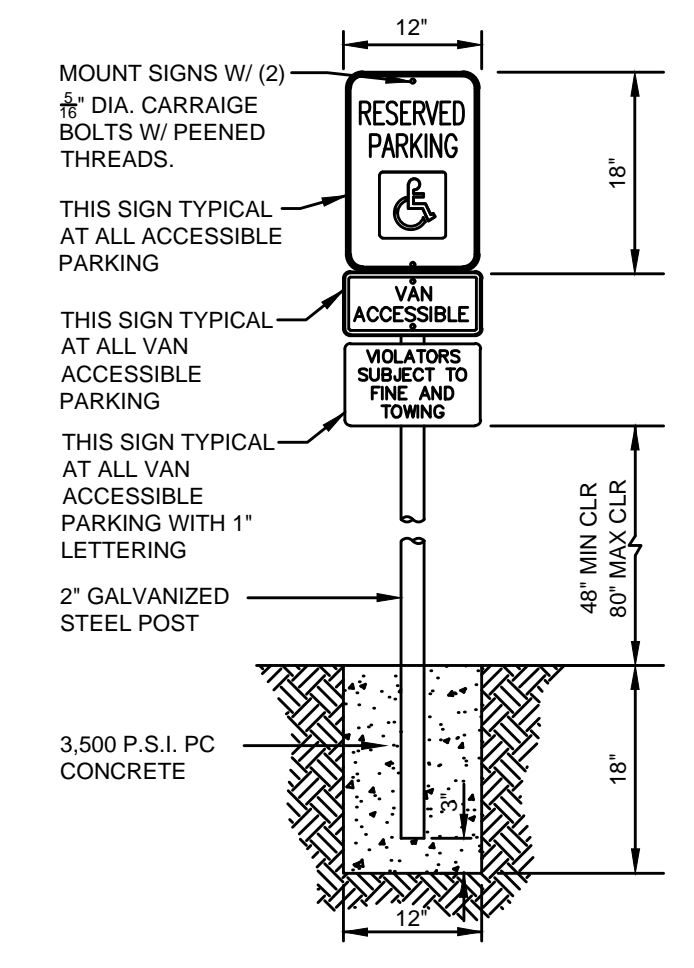
ACCESSIBLE PARKING EMBLEM DETAIL
N.T.S.



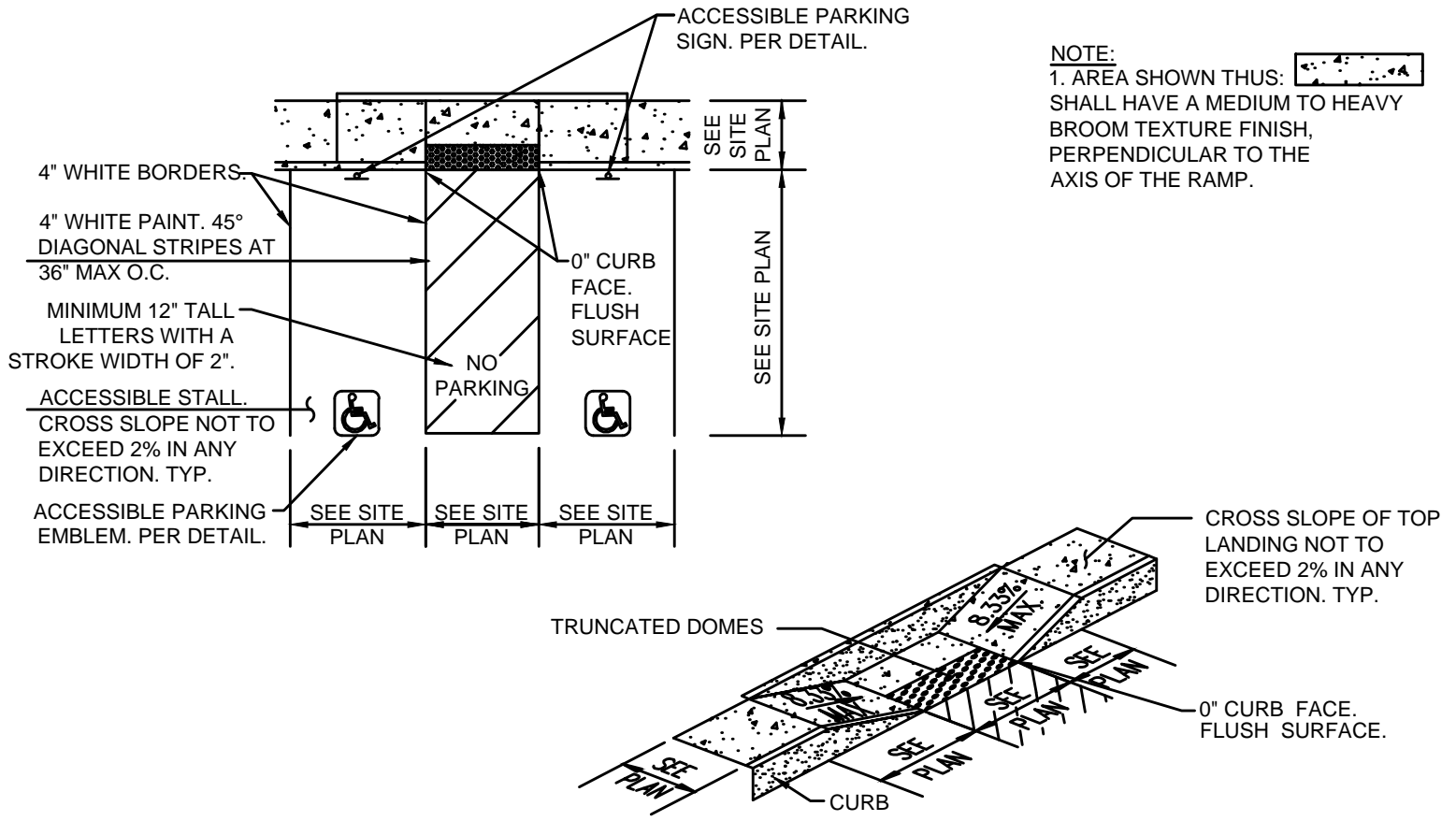
PRECAST CONCRETE WHEEL STOP DETAIL
N.T.S.



FIRE LANE DETAIL



ACCESSIBLE PARKING SIGN DETAIL
N.T.S.



ACCESSIBLE PARKING STALL DETAIL
N.T.S.

SHERWIN WILLIAMS

TRIANGLE ENGINEERING LLC

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Planning | Civil Engineering | Construction Management

NO.	DATE	DESCRIPTION	BY
1	12-21-23	1ST SUBMITTAL	KP

STATE OF TEXAS

KARTAVYA S. PATEL
97534

LICENSED PROFESSIONAL ENGINEER

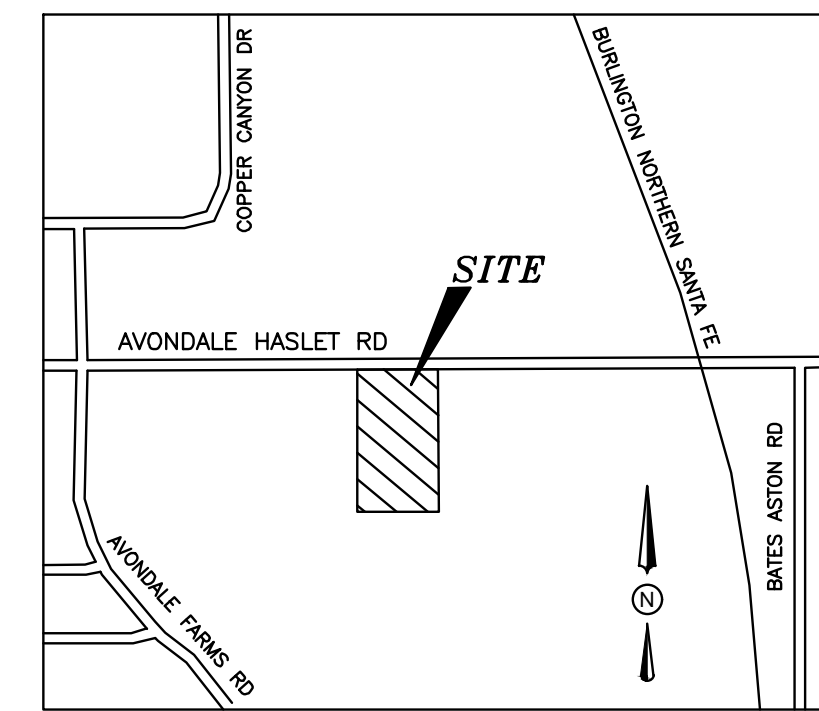
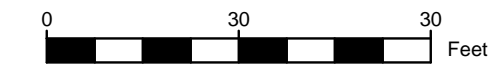
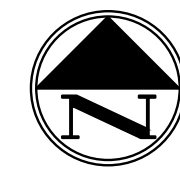
12/21/2023

SITE DETAILS

SHERWIN WILLIAMS
2101 AVONDALE HASLET ROAD
VISTA CROSSROADS ADDITION BLOCK 2, LOT 4
CITY OF FORT WORTH
TARRANT COUNTY, TEXAS

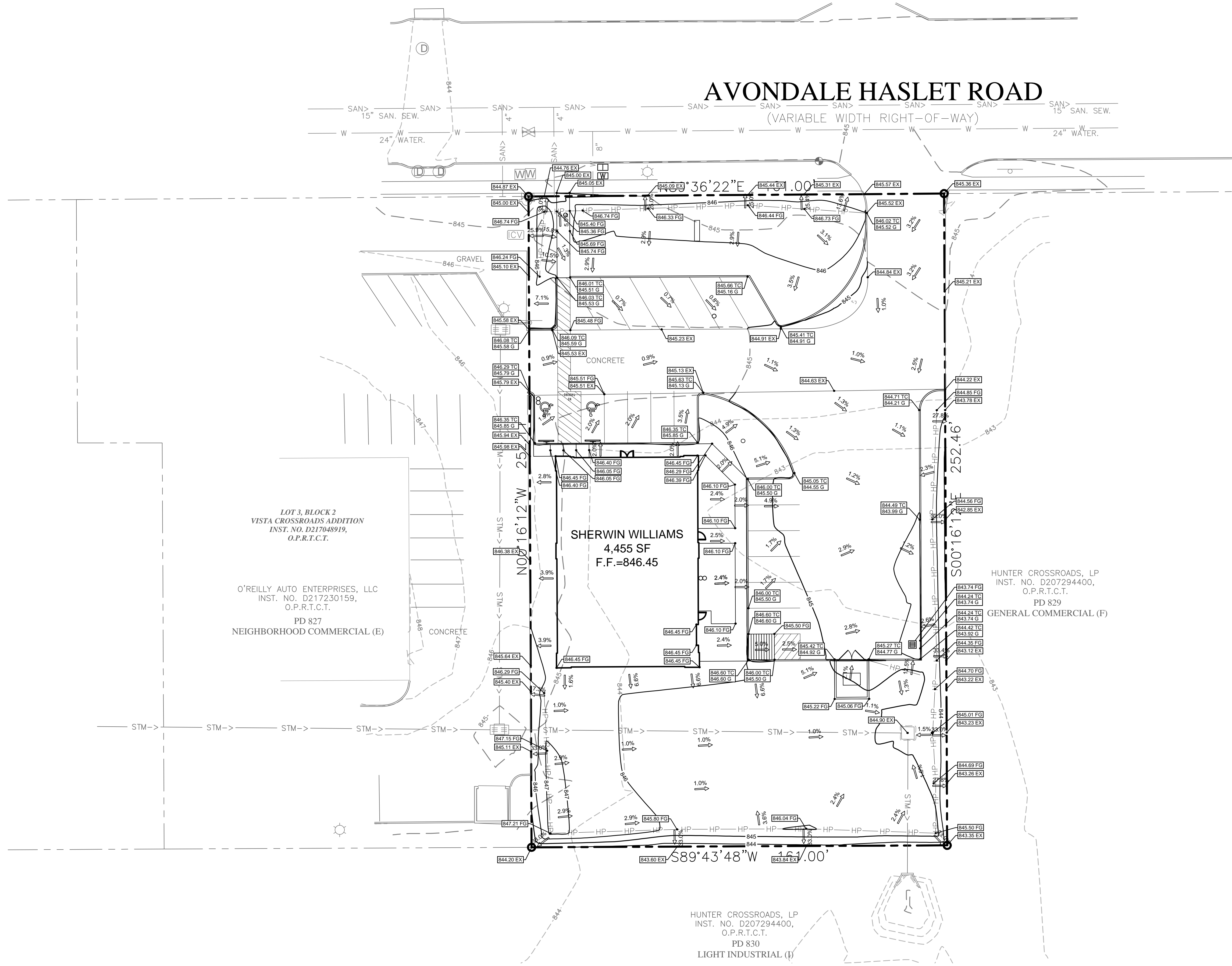
DATE	PROJECT
12/21/23	049-23
P.E.	DESIGN
KP	JZ

SHEET #
C-4.1



VICINITY MAP
N.T.S.

AVONDALE HASLET ROAD (VARIABLE WIDTH RIGHT-OF-WAY)



GRADING GENERAL NOTES

1. ALL SURPLUS EXCAVATION AND WASTE MATERIAL SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND IT SHALL BE HIS SOLE RESPONSIBILITY TO REMOVE SUCH SURPLUS EXCAVATION AND WASTE MATERIAL FROM THE SITE TO A PUBLIC DUMP SITE APPROVED FOR THE DISPOSAL OF SUCH MATERIALS. IF SURPLUS EXCAVATION IS REMOVED FROM THIS SITE TO ANOTHER PROPERTY, IT SHALL BE PLACED ON SUCH PROPERTY WITH THE WRITTEN CONSENT OF THE OWNER(S) OF SUCH PROPERTY. A COPY OF SUCH WRITTEN CONSENT SHALL BE PROVIDED TO THE OWNER. IF THE CONTRACTOR WISHES TO DISPOSE OF SURPLUS EXCAVATION ON-SITE, IT SHALL BE ONLY WITH THE PRIOR APPROVAL OF THE OWNERS PROJECT REPRESENTATIVE AND CARE SHOULD BE TAKEN TO AVOID BLOCKING NATURAL DRAINAGE AND INCREASING STEEP SLOPES. IF ANY OF THE HAULED EXCAVATION MATERIAL IS TAKEN TO ANOTHER LOCATION WITHIN THE CITY LIMITS, THE OWNER OF THE PROPERTY IS REQUIRED TO OBTAIN A LOT GRADING PERMIT BEFORE MATERIAL IS DELIVERED.
2. THE CONTRACTOR IS REQUIRED TO PROVIDE HIS OWN STAKING AND TO VERIFY PROJECT ELEVATIONS. "MATCH EXISTING" SHALL BE UNDERSTOOD TO APPLY TO BOTH VERTICAL ELEVATION AND HORIZONTAL ALIGNMENT.
3. THE CONTRACTOR SHALL PREPARE ALL LANDSCAPE AREAS INCLUDING STREET RIGHT-OF-WAY AREAS TO AN ACCEPTABLE SUBGRADE CONDITION IN ACCORDANCE WITH THE LANDSCAPE PLANS. IF THE CONTRACTOR IS NOT EMPLOYED TO PROVIDE AND INSTALL LANDSCAPING, HE SHALL PREPARE A FINISHED AND COMPACTED SUB-GRADE IN THE LANDSCAPING AREAS.
4. NO SLOPES TO EXCEED 4H:1V
5. WALL GREATER THAN 4' TO BE DESIGNED BY A STRUCTURAL ENGINEER.
6. RETAINING WALLS GREATER THAN 2' IN HEIGHT SHALL BE PERMITTED THROUGH THE CITY OF FRISCO BUILDING DEPARTMENT AND THE REVIEW OF SAID WALL IS NOT INCLUDED IN THIS SCOPE OF WORK.

FLOOD PLAIN NOTE

THE SUBJECT PROPERTY LIES WITHIN THE ZONE "X" UNSHADED (DETERMINED TO BE OF THE 0.20% ANNUAL CHANGE FLOODPLAIN) AS DETERMINED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY NATIONAL FLOOD INSURANCE PROGRAM (NFIP) FLOOD INSURANCE RATE MAP NUMBER 48439C0035L, DATED MARCH 21, 2019 FOR TARRANT COUNTY, TEXAS AND INCORPORATED AREAS.

BENCHMARKS

THE BASIS OF BEARINGS IS FROM THE TEXAS STATE PLANE COORDINATE SYSTEM, NAD83, NORTH CENTRAL ZONE AS DERIVED FROM GPS OBSERVATIONS USING THE ALLTERRA R TK NETWORK AND ADJUSTED TO SURFACE USING A SURFACE SCALE FACTOR OF 1.00012.

BENCHMARK NO. 1
SQUARE WITH AN "X" CUT IN CONCRETE DRIVEWAY CURB RETURN 50' +/- NORTHWEST OF NORTHEAST CORNER OF SUBJECT PROPERTY.
ELEVATION: 733.88

GRADING LEGEND

EXISTING MINOR CONTOURS	----- 750 -----
EXISTING MAJOR CONTOURS	----- 750 -----
TOP OF CURB & GUTTER ELEVATION	TC 740.31 G 739.81
FINISHED GRADE	600.00 FG
EXISTING GRADE	600.00 EX
DRAINAGE FLOW DIRECTION	2.0%
MINOR CONTOURS	----- 740 -----
MAJOR CONTOURS	----- 740 -----
SWALE	HP-HP-HP-HP-HP-HP
HIGH POINT	HP
STORM PIPE	STM->
CURB INLET	⊞
STORM MANHOLE	⊞
STORM CLEANOUT	⊞
RETAINING WALL	▬
RIP RAP	▨



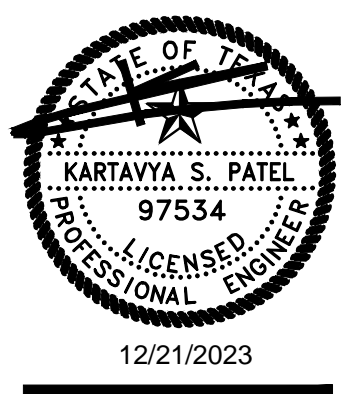
TX PE FIRM #11525

TRIANGLE ENGINEERING LLC

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W: triangle-eng.com | 10172 W. McDermott Drive, TX 75013

Planning | Civil Engineering | Construction Management

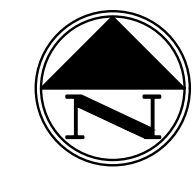
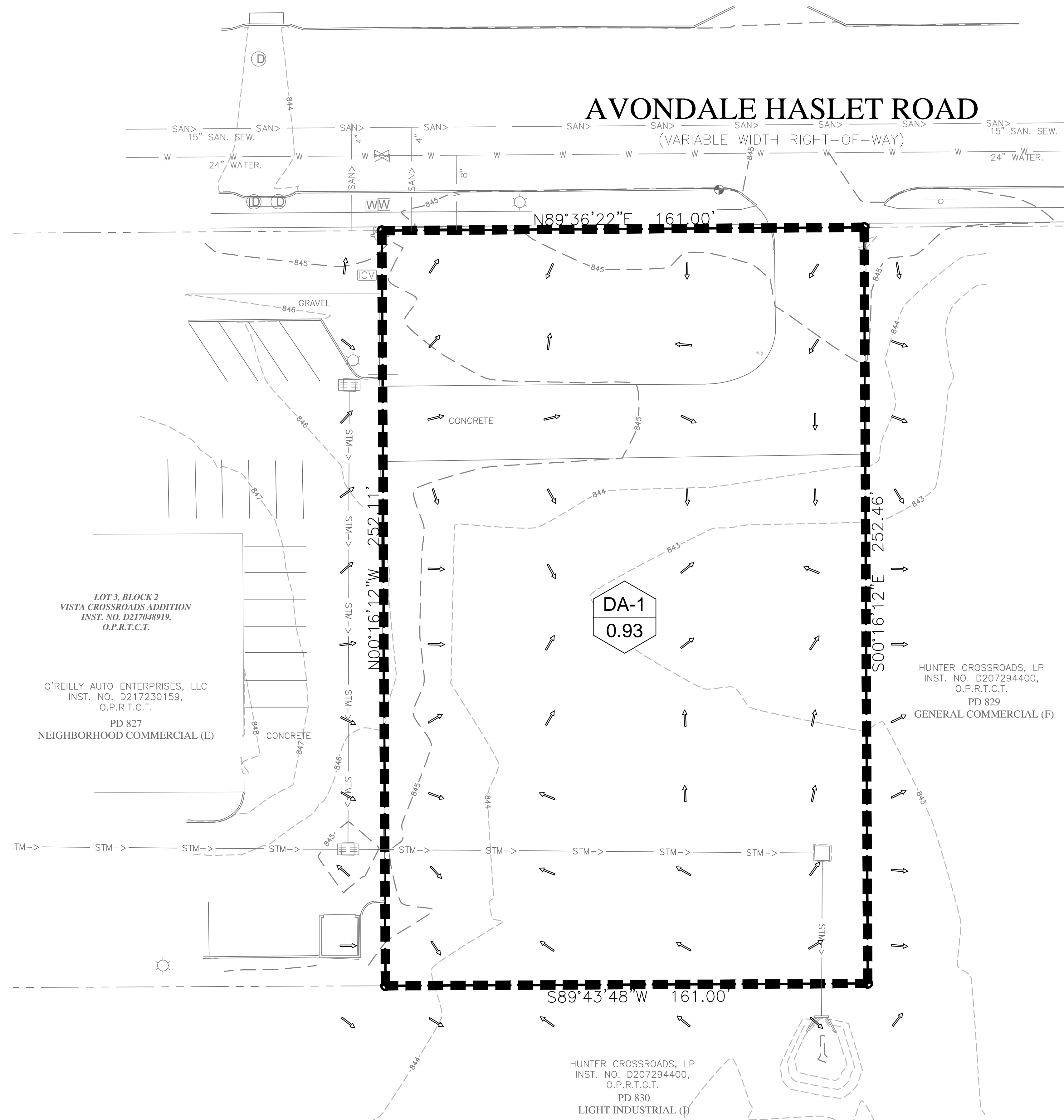
NO.	DATE	DESCRIPTION	BY	KP
1	12-21-23	1ST SUBMITTAL		



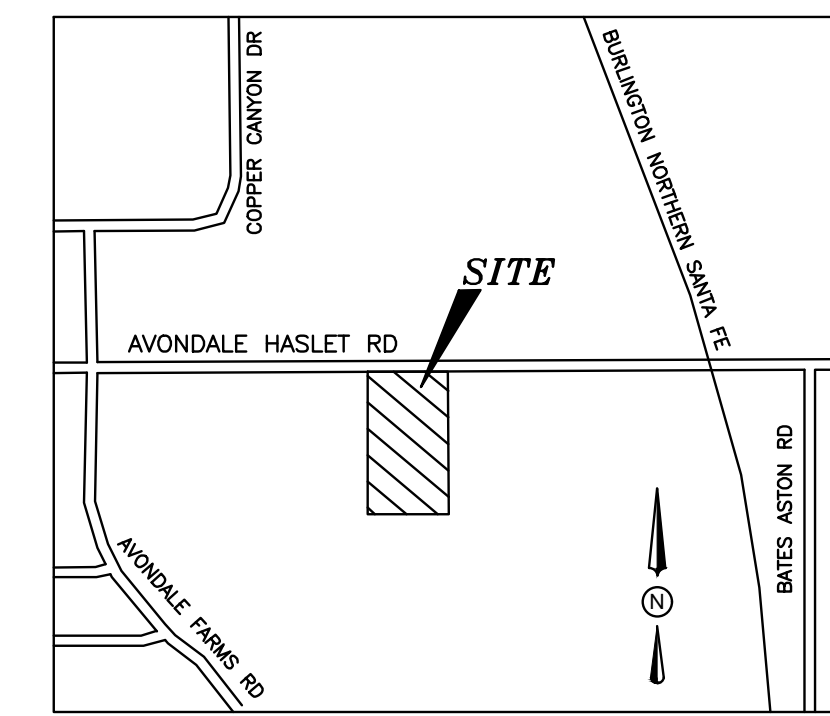
GRADING PLAN
SHERWIN WILLIAMS
2101 AVONDALE HASLET ROAD
VISTA CROSSROADS ADDITION BLOCK 2, LOT 4
CITY OF FORT WORTH
TARRANT COUNTY, TEXAS

DATE	PROJECT
12/21/23	049-23
P.E.	DESIGN
KP	JZ

SHEET #
C-5.0



0 50 100 Feet



VICINITY MAP
N.T.S.

PRE-DRAINAGE LEGEND

EXISTING MINOR CONTOURS	--- 750 ---
EXISTING MAJOR CONTOURS	--- 750 ---
DRAINAGE AREA NO.	DA-1
DRAINAGE AREA ACREAGE	0.25
DRAINAGE DIVIDE	-----
DRAINAGE FLOW DIRECTION	→

FLOOD PLAIN NOTE

THE SUBJECT PROPERTY LIES WITHIN THE ZONE "X" UNSHADED (DETERMINED TO BE OF THE 0.20% ANNUAL CHANGE FLOODPLAIN) AS DETERMINED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY NATIONAL FLOOD INSURANCE PROGRAM (NFIP) FLOOD INSURANCE RATE MAP NUMBER 48439C0035L, DATED MARCH 21, 2019 FOR TARRANT COUNTY, TEXAS AND INCORPORATED AREAS.

BENCHMARKS

THE BASIS OF BEARINGS IS FROM THE TEXAS STATE PLANE COORDINATE SYSTEM, NAD83, NORTH CENTRAL ZONE AS DERIVED FROM GPS OBSERVATIONS USING THE ALLTERRA R TK NETWORK AND ADJUSTED TO SURFACE USING A SURFACE SCALE FACTOR OF 1.00012.

BENCHMARK NO. 1
SQUARE WITH AN "X" CUT IN CONCRETE DRIVEWAY CURB RETURN 50' +/- NORTHWEST OF NORTHEAST CORNER OF SUBJECT PROPERTY.
ELEVATION: 733.88

PRE-DEVELOPED DRAINAGE CALCULATIONS												
DRAINAGE AREA	C	Tc (min)	I-2 (in/hr)	I-10 (in/hr)	I-25 (in/hr)	I-100 (in/hr)	A (acres)	Q-2 (cfs)	Q-10 (cfs)	Q-25 (cfs)	Q-100 (cfs)	REMARKS
DA-1	0.38	10	4.21	6.44	7.72	11.99	0.93	1.49	2.28	2.73	4.24	4'X4' AREA INLET
TOTAL							0.93	1.49	2.28	2.73	4.24	

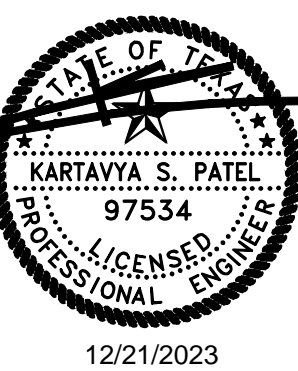
Based on (ISWM) Technical Manual and the National Oceanic and Atmospheric Administration's (NOH) Atlas 14
Precipitation-Frequency Atlas Of the United States, Volume 11 Version 2.0: Texas' (Perica et al-2018), Annual Maximum Series

WEIGHTED RUNOFF COEFF. CALCS FOR DRAINAGE AREA A
 $C = \frac{0.30 \times 0.90 + 0.90 \times 0.13}{0.93} = 0.38$



TX PE FIRM #11525
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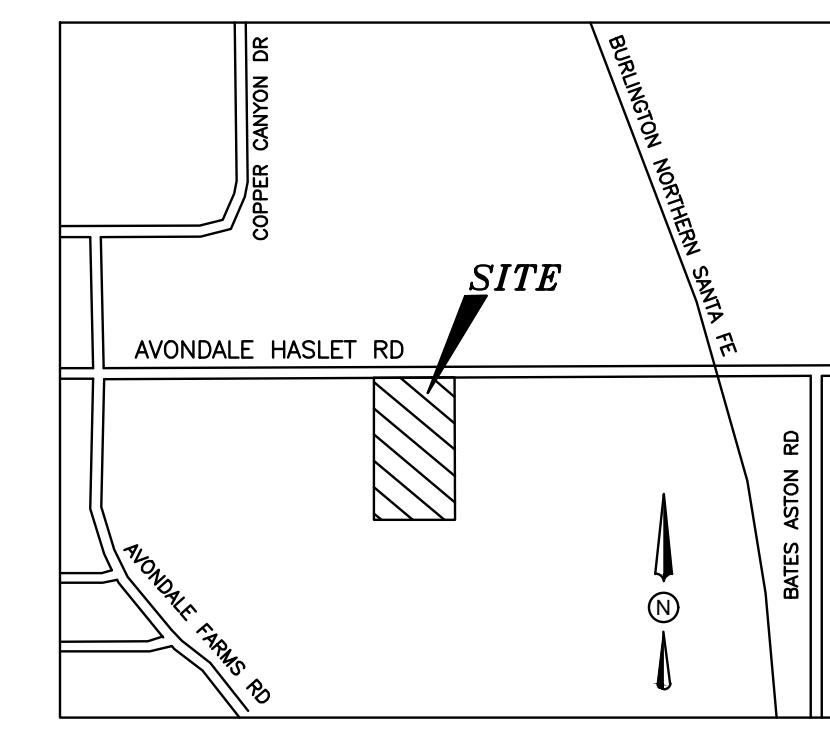
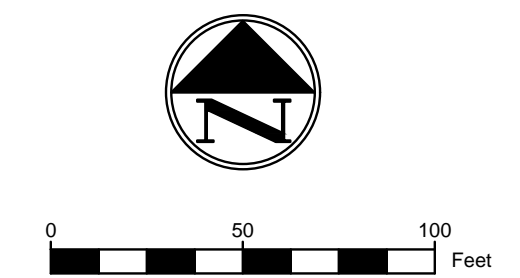
NO.	DATE	DESCRIPTION	BY
1	12-21-23	1ST SUBMITTAL	KP



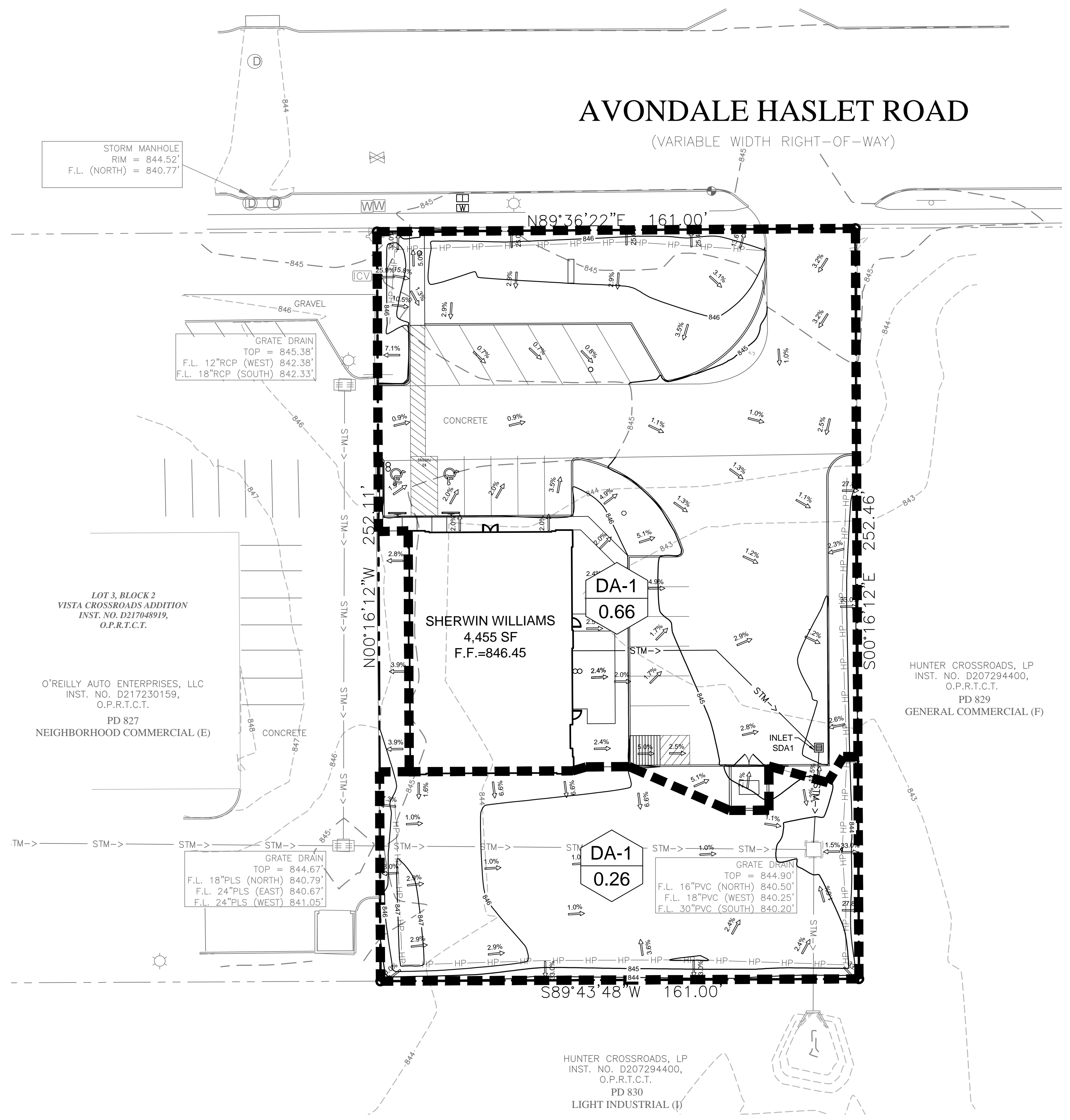
PRE DRAINAGE PLAN
 SHERWIN WILLIAMS
 2101 AVONDALE HASLET ROAD
 VISTA CROSSROADS ADDITION BLOCK 2, LOT 4
 CITY OF FORT WORTH
 TARRANT COUNTY, TEXAS

DATE	PROJECT
12/21/23	049-23
P.E.	DESIGN
KP	JZ

SHEET #
C-6.0



VICINITY MAP
N.T.S.



POST-DRAINAGE LEGEND

EXISTING MINOR CONTOURS	---	750
EXISTING MAJOR CONTOURS	- - -	750
MINOR CONTOURS	---	740
MAJOR CONTOURS	- - -	740

DRAINAGE AREA NO. **DA-2**

DRAINAGE AREA ACREAGE **0.50**

DRAINAGE DIVIDE **---**

DRAINAGE FLOW DIRECTION **1.0%**

HIGH POINT **HP**

FLOOD PLAIN NOTE

THE SUBJECT PROPERTY LIES WITHIN THE ZONE "X" UNSHADED (DETERMINED TO BE OF THE 0.20% ANNUAL CHANGE FLOODPLAIN) AS DETERMINED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY NATIONAL FLOOD INSURANCE PROGRAM (NFIP) FLOOD INSURANCE RATE MAP NUMBER 48439C0035L, DATED MARCH 21, 2019 FOR TARRANT COUNTY, TEXAS AND INCORPORATED AREAS.

BENCHMARKS

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BENCHMARK NO. 1
 SQUARE WITH AN "X" CUT IN CONCRETE DRIVEWAY CURB RETURN 50' +/- NORTHWEST OF NORTHEAST CORNER OF SUBJECT PROPERTY.
 ELEVATION: 733.88

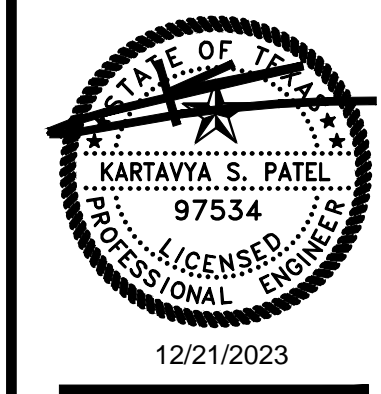
POST-DEVELOPED DRAINAGE CALCULATIONS

DRAINAGE AREA	C	Tc (min)	I-2 (in/hr)	I-10 (in/hr)	I-25 (in/hr)	I-100 (in/hr)	A (acres)	Q-2 (cfs)	Q-10 (cfs)	Q-25 (cfs)	Q-100 (cfs)	REMARKS
DA-1	0.60	10	4.21	6.44	7.72	11.99	0.66	1.67	2.55	3.06	4.75	4'X4' AREA INLET
DA-2	0.60	10	4.21	6.44	7.72	11.99	0.26	0.66	1.00	1.20	1.87	4'X4' AREA INLET
TOTAL							0.92	2.32	3.55	4.26	6.62	

Based on (ISWM) Technical Manual and the National Oceanic and Atmospheric Administration's (NOH) Atlas 14
 Precipitation-Frequency Atlas Of the United States, Volume 11 Version 2.0: Texas' (Perica et al- 2018), Annual Maximum Series

WEIGHTED RUNOFF COEFF. CALCS FOR DRAINAGE AREA A
 $C = \frac{0.30 \times 0.47 + 0.90 \times 0.46}{0.93} = 0.60$

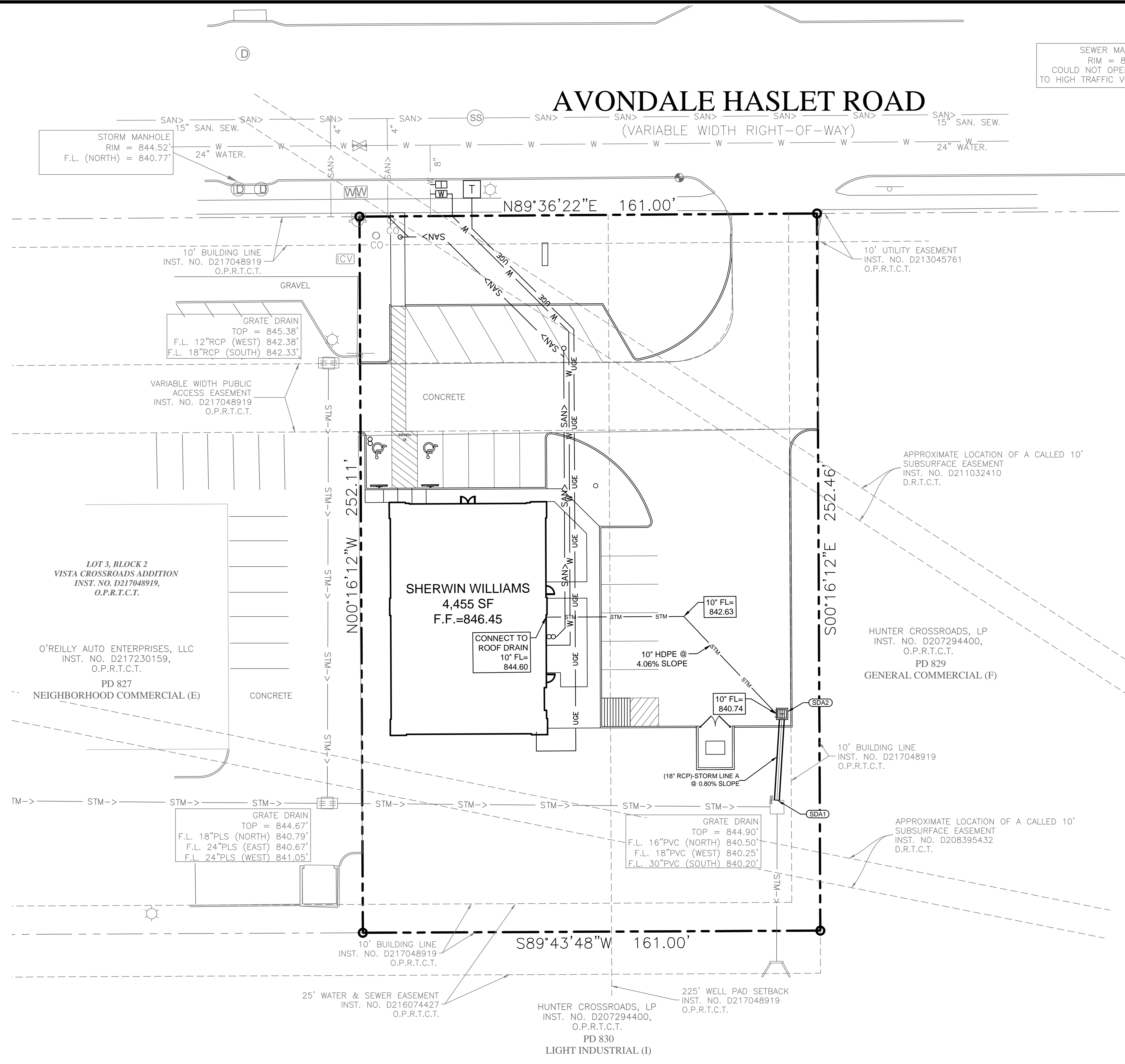
NO.	DATE	DESCRIPTION
1	12-21-23	1ST SUBMITTAL



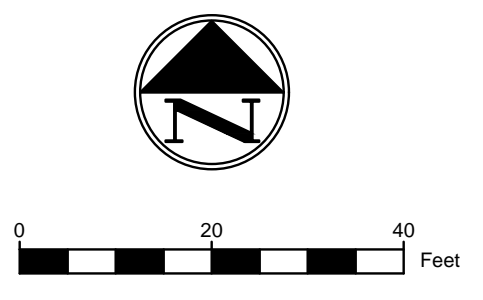
12/21/2023

POST DRAINAGE PLAN
 SHERWIN WILLIAMS
 2101 AVONDALE HASLET ROAD
 VISTA CROSSROADS ADDITION BLOCK 2, LOT 4
 CITY OF FORT WORTH
 TARRANT COUNTY, TEXAS

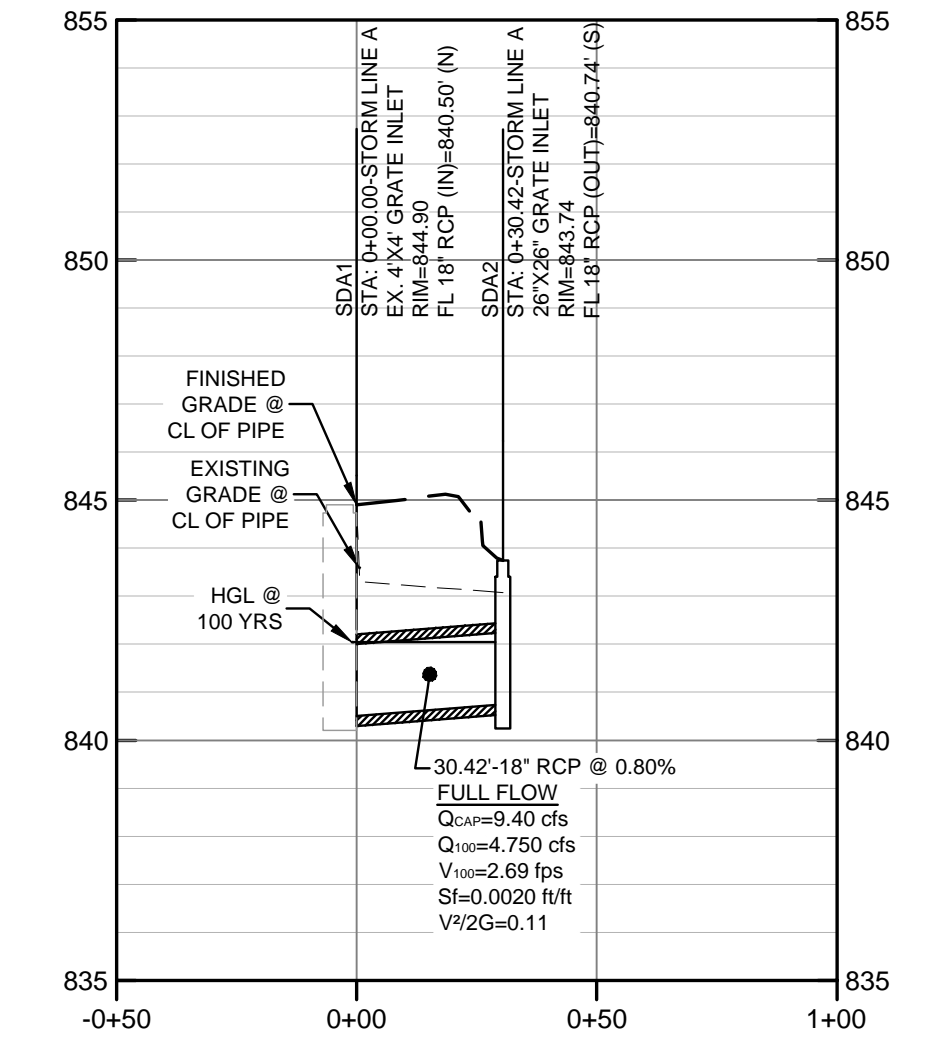
DATE	PROJECT
12/21/23	049-23
P.E.	DESIGN
KP	JZ



SEWER MAN
RIM = 84
COULD NOT OPEN
TO HIGH TRAFFIC VOLUME



STORM LINE A PROFILE
SCALE (H: 1" = 40' & V: 1" = 4')



UTILITY LEGEND	
UNDERGROUND TELEPHONE LINE	---UGT---
UNDERGROUND ELECTRIC LINE	---UGE---
GAS LINE	---G---
SANITARY SEWER LINE	---SAN---
WATER MAIN	---W---
DOMESTIC WATER LINE	---D---
STORM LINE	---
STORM SEWER MANHOLE	⊙
STORM SEWER CLEANOUT	⊙
SANITARY SEWER MANHOLE	⊙
SANITARY SEWER CLEANOUT	⊙
SANITARY SEWER DOUBLE CLEANOUT	⊙
SANITARY SEWER SAMPLE PORT	⊙
WATER METER	⊙
IRRIGATION METER	⊙
GAS METER	⊙
FIRE HYDRANT	⊙
TRANSFORMER	⊙
LIGHT POLE	⊙
POWER POLE	⊙

FLOOD PLAIN NOTE
THE SUBJECT PROPERTY LIES WITHIN THE ZONE 'X' UNSHADED (DETERMINED TO BE OF THE 0.20% ANNUAL CHANCE FLOODPLAIN) AS DETERMINED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY NATIONAL FLOOD INSURANCE PROGRAM (NFIP) FLOOD INSURANCE RATE MAP NUMBER 48439C0035L, DATED MARCH 21, 2019 FOR TARRANT COUNTY, TEXAS AND INCORPORATED AREAS.

BENCHMARKS
THE BASIS OF BEARINGS IS FROM THE TEXAS STATE PLANE COORDINATE SYSTEM, NAD83, NORTH CENTRAL ZONE AS DERIVED FROM GPS OBSERVATIONS USING THE ALLTERRA R TK NETWORK AND ADJUSTED TO SURFACE USING A SURFACE SCALE FACTOR OF 1.00012.
BENCHMARK NO. 1
SQUARE WITH AN 'X' CUT IN CONCRETE DRIVEWAY CURB RETURN 50' +/- NORTHWEST OF NORTHEAST CORNER OF SUBJECT PROPERTY.
ELEVATION: 733.88

GRATE INLET IN SUMP					
INLET DESCRIPTION	Q-100 (cfs)	AREA (sf.)	DEPTH AT OPENING (ft.)	Q, 50%	REMARKS
LINE A STA. 2+33.11	5.78	4.00	0.50	13.60	6.80

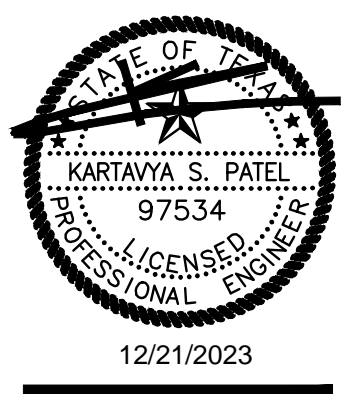
NOTE: CAPACITY FOR A GRATE INLET IN SUMP IS Q = 4.82A^{1.49} * 0.5

Line No.	Line ID	Line Length (ft)	Known Q (cfs)	Flow Rate (cfs)	Capac Full (cfs)	Vel Ave (ft/s)	Line Size (in)	Line Slope (%)	Invert Dn (ft)	Invert Up (ft)	HGL Dn (ft)	HGL Up (ft)	Gnd/Rim El Dn (ft)	Gnd/Rim El Up (ft)	J-Loss Coeff	Sf Ave (%)	Vel Hd Up (ft)
1	SDA1 TO SDA2	30.415	4.75	4.75	9.39	2.81	18	0.80	840.50	840.74	842.00	842.04	842.30	843.74	1.25	0.196	0.13



TX PE FIRM #11525
TRIANGLE ENGINEERING LLC
T: 409.331.8566 | F: 409.213.7145 | E: info@triangle-eng.com
W: triangle-eng.com | 10172 W. McDemott Drive, TX 75013
Planning | Civil Engineering | Construction Management

NO.	DATE	DESCRIPTION
1	12-21-23	1ST SUBMITTAL

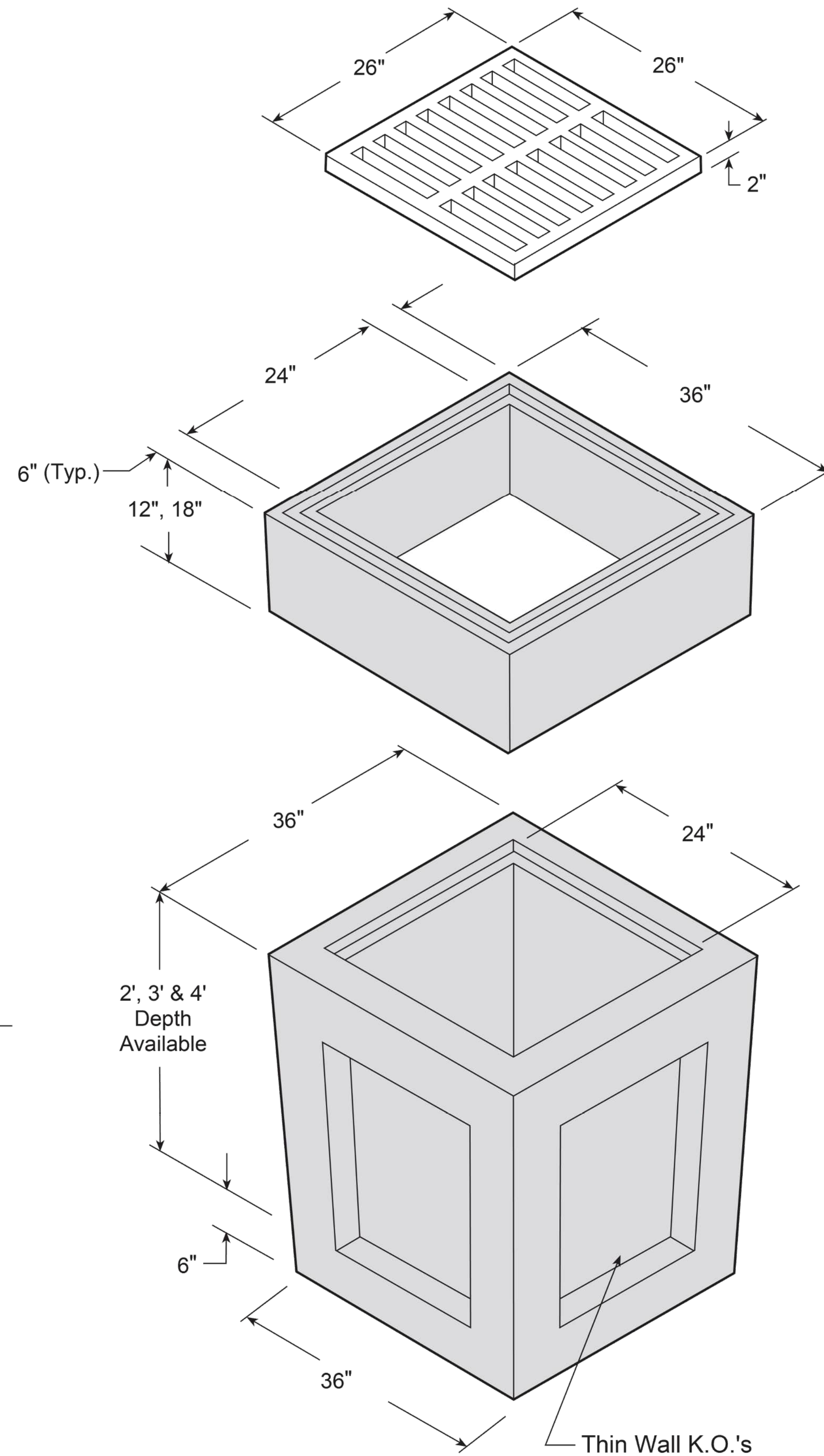


STORM SEWER PROFILES
SHERWIN WILLIAMS
2101 AVONDALE HASLET ROAD
VISTA CROSSROADS ADDITION BLOCK 2, LOT 4
CITY OF FORT WORTH
TARRANT COUNTY, TEXAS

DATE	PROJECT
12/21/23	049-23
P.E.	DESIGN
KP	JZ

SHEET #
C-6.2

Precast Drainage Structures



Materials & Features

MAXIMUM PIPE SIZE: 18" I.D. R.C.P.

CONCRETE: 5,000 PSI

REINFORCING: per ASTM A-615 or A-185

CAST IRON FRAME & GRATE
per ASTM A 48; Class 30/35

GRATE WEIGHT: 100 Lbs.

CATCH BASIN WEIGHT:
2' 1,580 Lbs.
3' 2,500 Lbs.
4' 3,420 Lbs.

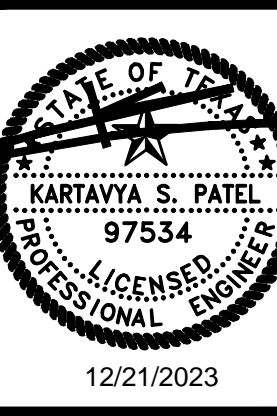
EXTENSION WEIGHT:
12" 500 Lbs.
18" 750 Lbs.

-No Scale-
All dimensions subject to allowable
specification tolerances.

TITLE	PLANT	STATE	SECTION.PAGE	DATE
#26 Catch Basin	Waco	TX	8.6	Feb 2016



NO.	DATE	DESCRIPTION	BY
1	12-21-23	1ST SUBMITTAL	KP

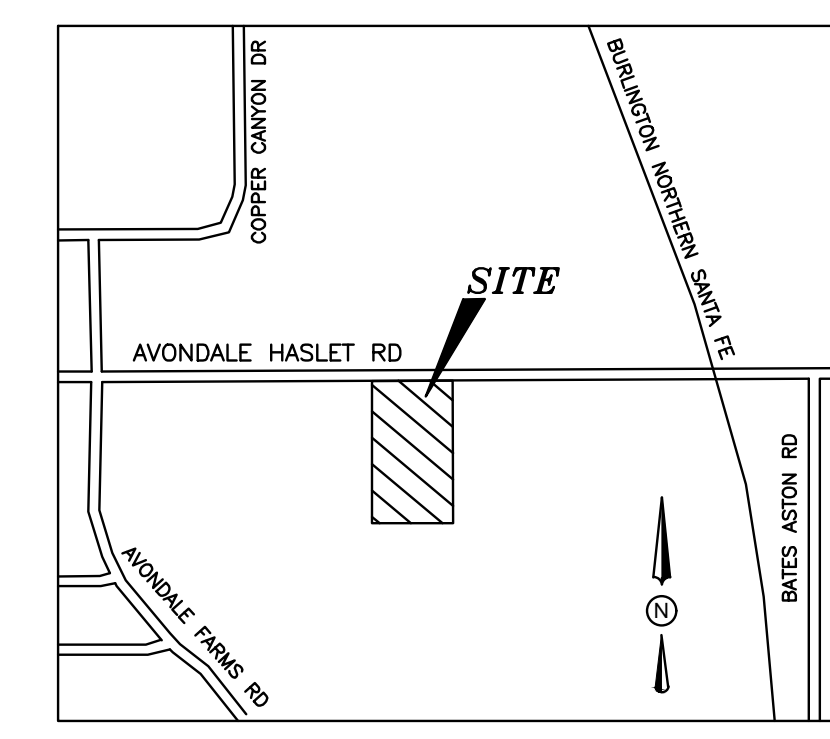
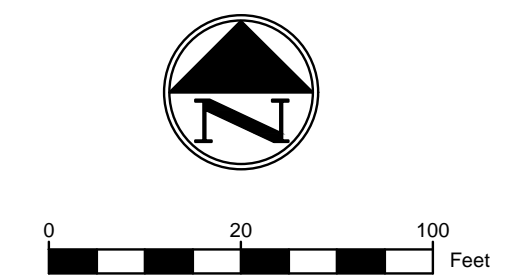


STORM SEWER DETAILS
SHERWIN WILLIAMS
2101 AVONDALE HASLET ROAD
VISTA CROSSROADS ADDITION BLOCK 2, LOT 4
CITY OF FORT WORTH
TARRANT COUNTY, TEXAS

DATE	PROJECT
12/21/23	049-23

P.E.	DESIGN
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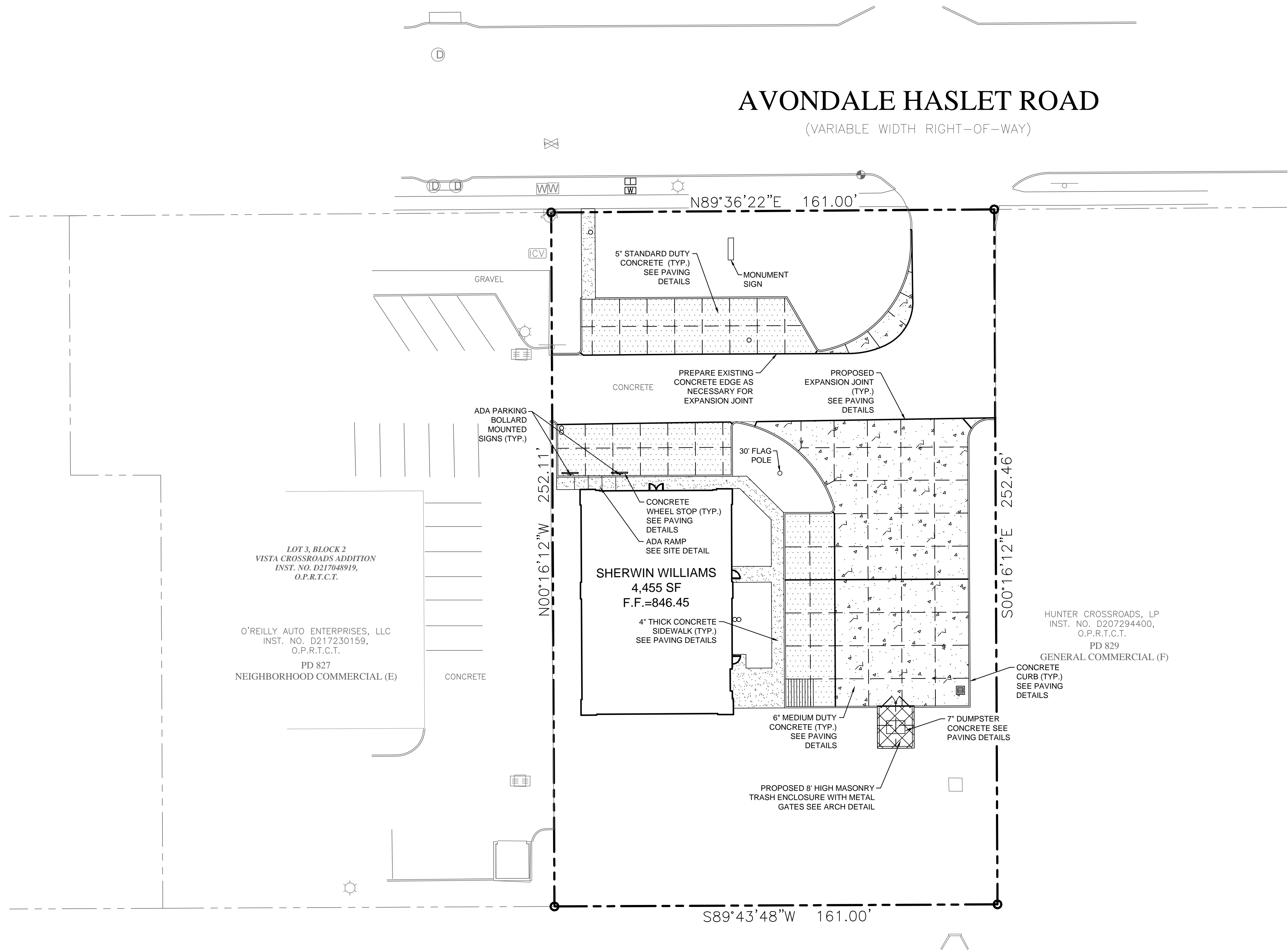
SHEET #
C-6.3



VICINITY MAP
N.T.S.

AVONDALE HASLET ROAD

(VARIABLE WIDTH RIGHT-OF-WAY)



LOT 3, BLOCK 2
 VISTA CROSSROADS ADDITION
 INST. NO. D217048919,
 O.P.R.T.C.T.

O'REILLY AUTO ENTERPRISES, LLC
 INST. NO. D217230159,
 O.P.R.T.C.T.
 PD 827
 NEIGHBORHOOD COMMERCIAL (E)

HUNTER CROSSROADS, LP
 INST. NO. D207294400,
 O.P.R.T.C.T.
 PD 829
 GENERAL COMMERCIAL (F)

HUNTER CROSSROADS, LP
 INST. NO. D207294400,
 O.P.R.T.C.T.
 PD 830
 LIGHT INDUSTRIAL (I)

PAVING GENERAL NOTES

- STRIP & REMOVE FROM THE CONSTRUCTION AREA ALL TOPSOIL, ORGANICS & VEGETATION TO A MINIMUM DEPTH OF 6 INCHES.
- CONTROL JOINTS FORMED BY SAWING ARE RECOMMENDED BOTH LONGITUDINAL AND TRANSVERSE DIRECTIONS. CONTROL JOINT SHALL BE SAWED WITHIN 3 HOURS AFTER PLACING CONCRETE. JOINTS SHALL BE PROPERLY CLEANED AND SEALED AS SOON AS POSSIBLE AFTER JOINTS ARE CUT.
- SIDEWALK AROUND THE BUILDING SHALL NOT BE STRUCTURALLY CONNECTED TO THE BUILDING FOUNDATION UNLESS IT'S NOTED ON THE STRUCTURAL PLANS.

PAVING LEGEND

EXPANSION JOINT (@ 60' MAX.)	---
SAWCUT JOINT (@ 15' MAX.)	- - - - -
IRRIGATION SLEEVES	----
5' STANDARD DUTY CONCRETE	[Pattern]
6' MEDIUM DUTY CONCRETE	[Pattern]
7' DUMPSTER CONCRETE	[Pattern]
4" SIDEWALK	[Pattern]

EASEMENT/SETBACK LEGEND

BUILDING SET BACK	B.S.
LANDSCAPE SETBACK	L.S.
BUILDABLE AREA SF	B.A.
PRIVATE WALL AND WALL MAINTENANCE EASEMENT	P.W.M.E.
PRIVATE FENCE AND FENCE MAINTENANCE EASEMENT	P.F.M.E.
SIDEWALK EASEMENT	S.E.
ELECTRICAL EASEMENT	E.E.
UTILITY EASEMENT	U.E.

EXISTING LEGEND

---	BOUNDARY LINE	WV	WATER VALVE
- - - - -	ADJOINER BOUNDARY LINE	TSB	TRAFFIC SIGNAL BOX
- - - - -	EASEMENT LINE (AS NOTED)	GS	GAS SIGN MARKER
W	WATER LINE	WM	WATER METER
SS	SANITARY SEWER LINE	EP	ELECTRIC PEDESTAL
SD	STORM DRAIN LINE (AS NOTED)	TM	TELEPHONE MANHOLE
OHE	OVERHEAD ELECTRIC LINE	SMH	STORM MAN HOLE
G	GAS LINE	LP	LIGHT POLE
U/F	UNDERGROUND FIBER OPTIC LINE	PP	POWER POLE
S	SIGN	BM	BENCH MARK
IR	SET IRON ROD (AS NOTED)	CM	CONTROL MONUMENT
FR	FOUND IRON ROD (AS NOTED)	SSC	SANITARY SEWER CLEANOUT
X	"X" CUT FOUND	OR	OFFICIAL PUBLIC RECORDS
X	"X" CUT SET	O.P.R.B.C.T.	BOWIE COUNTY, TEXAS
FH	FIRE HYDRANT	D.R.B.C.T.	DEED RECORDS
SSM	SANITARY SEWER MAN HOLE	BOWIE COUNTY, TEXAS	
		U.U.	UNDERGROUND UTILITIES (SUE)

NO.	DATE	DESCRIPTION
1	12-21-23	1ST SUBMITTAL

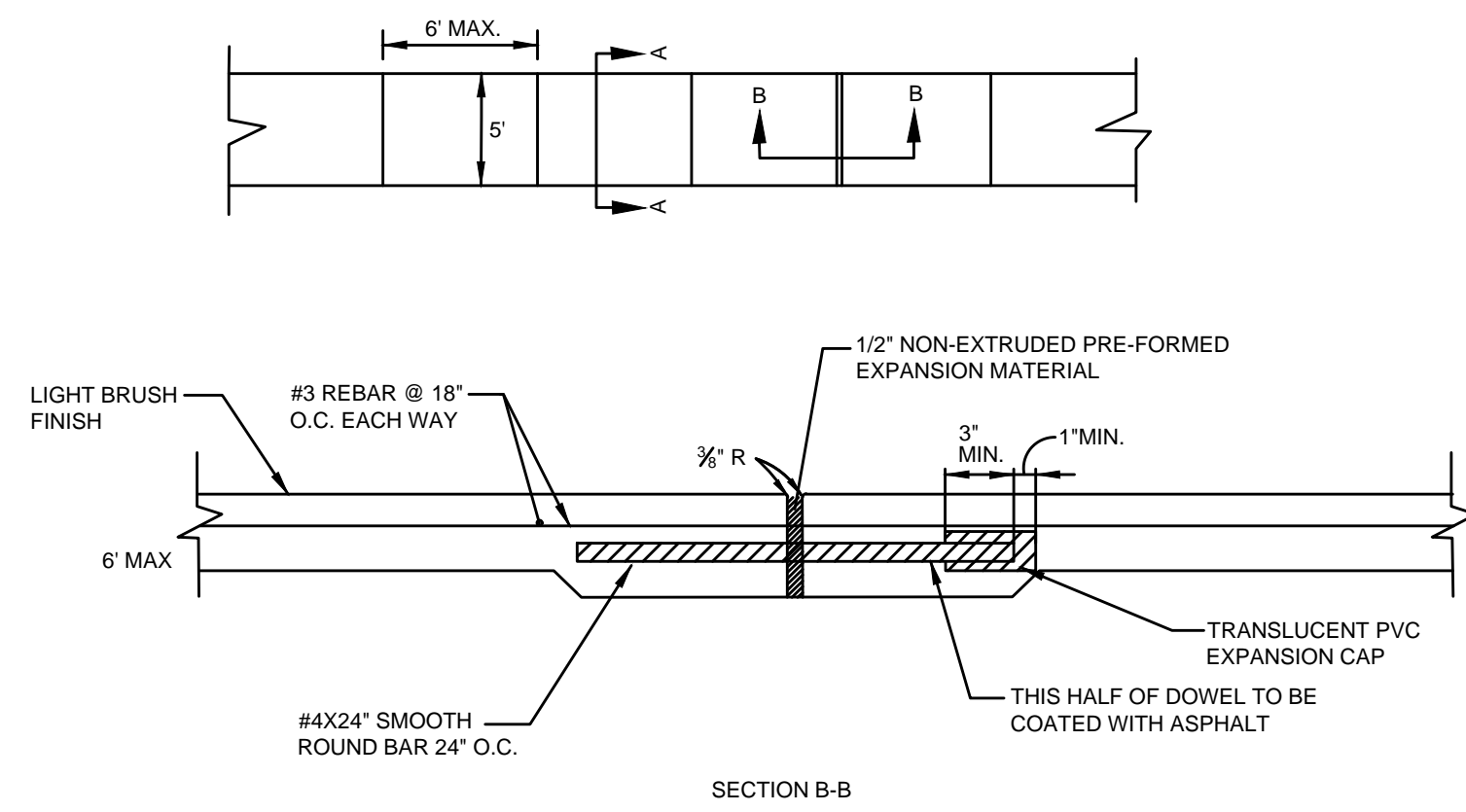
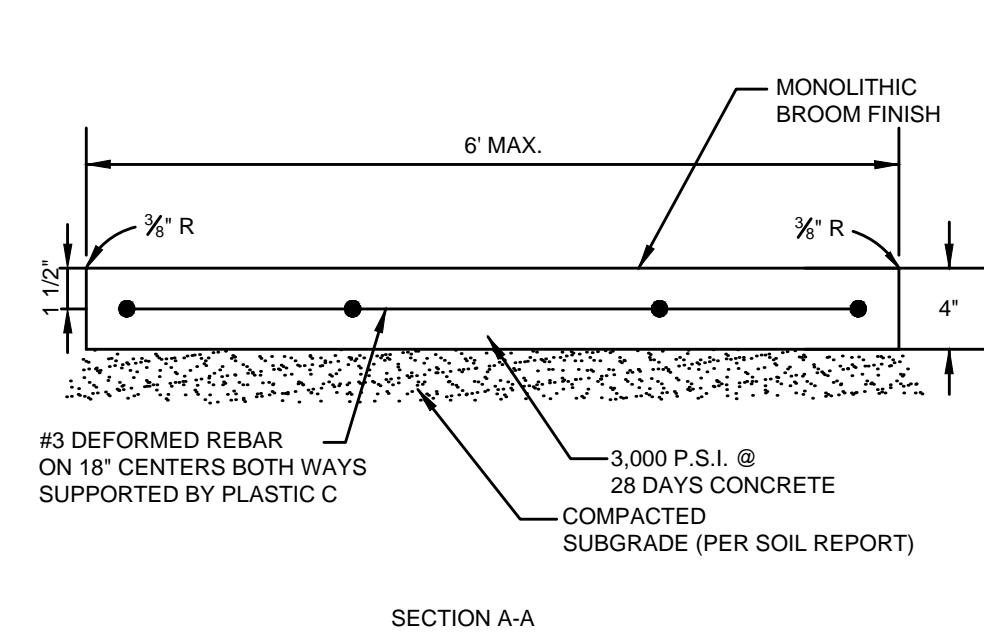


12/21/2023

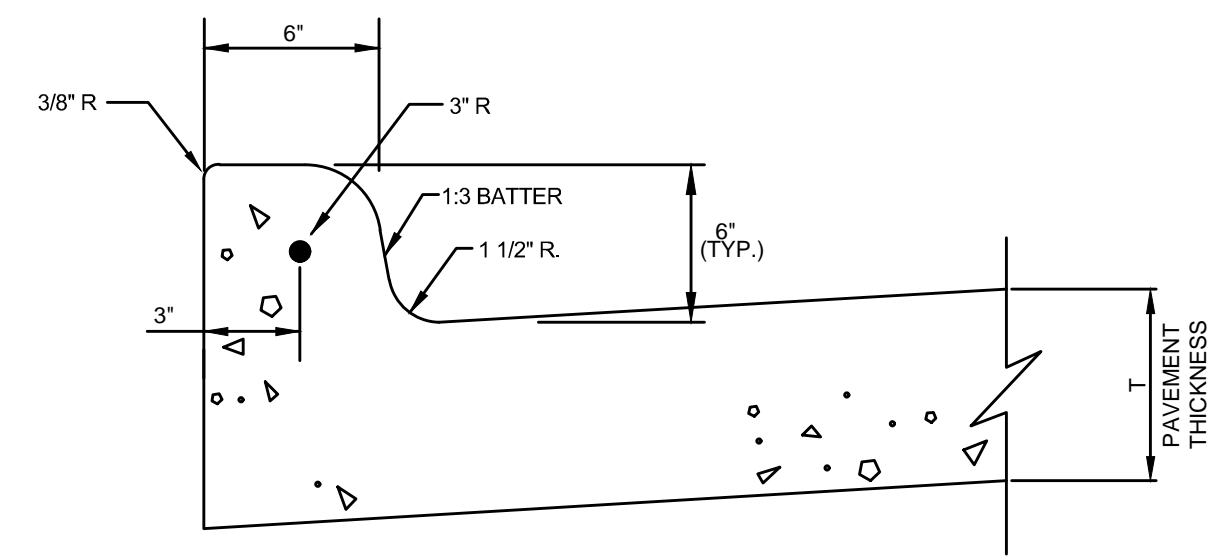
PAVING PLAN
 SHERWIN WILLIAMS
 2101 AVONDALE HASLET ROAD
 VISTA CROSSROADS ADDITION BLOCK 2, LOT 4
 CITY OF FORT WORTH
 TARRANT COUNTY, TEXAS

DATE	PROJECT
12/21/23	049-23
P.E.	DESIGN
KP	JZ

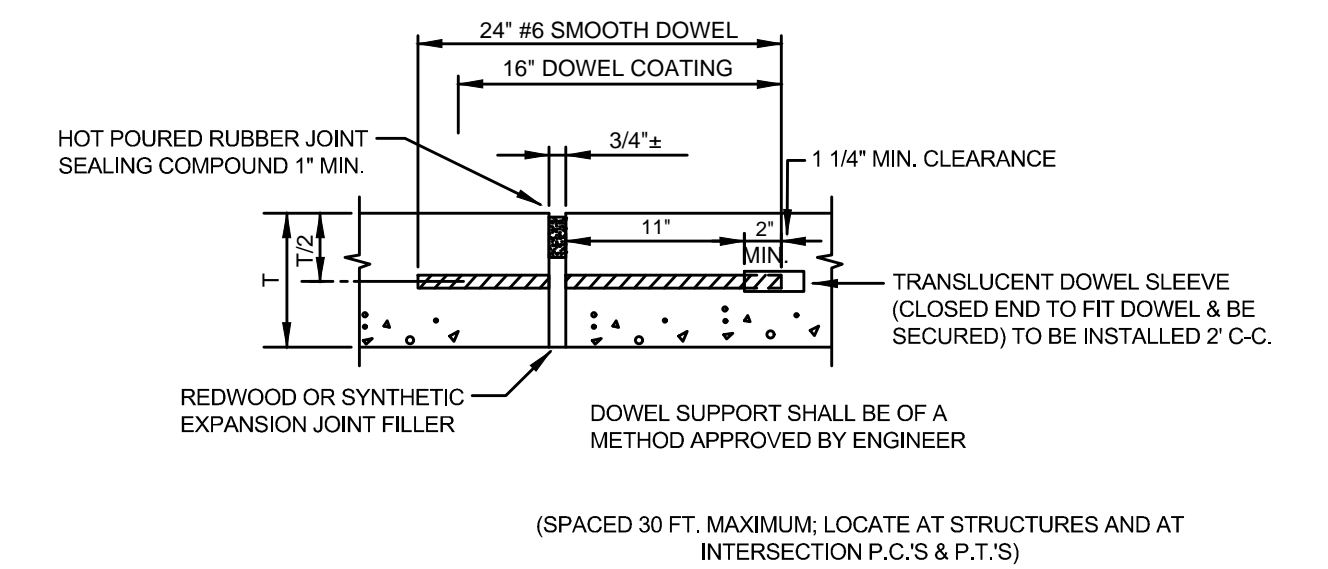
SHEET #
C-7.0



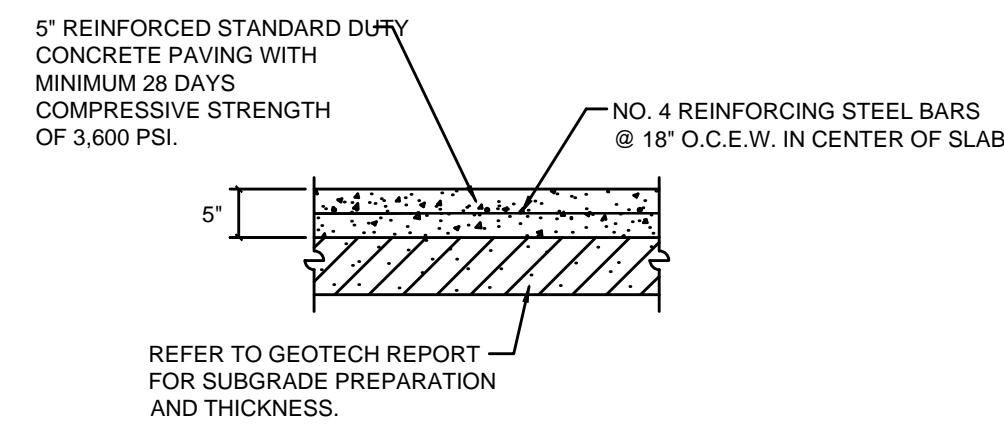
SIDEWALK DETAIL
N.T.S.



TYPICAL CURB DETAIL
N.T.S.

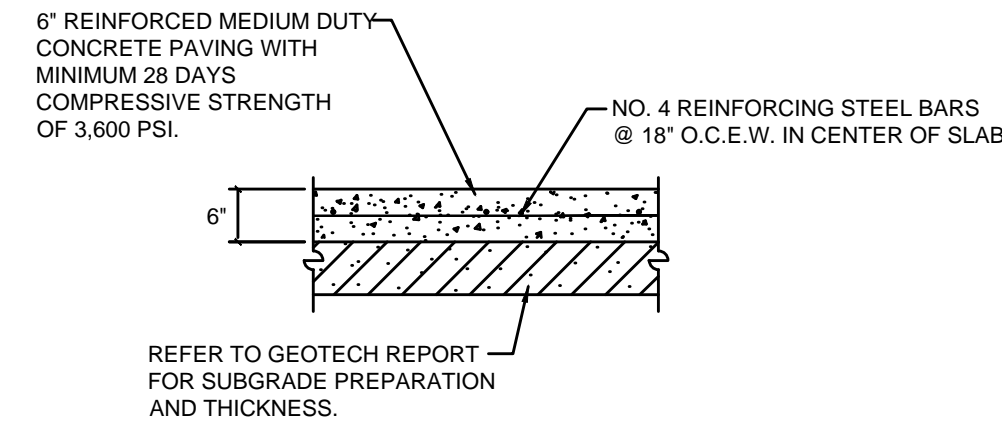


TYPICAL EXPANSION JOINT DETAIL
N.T.S.



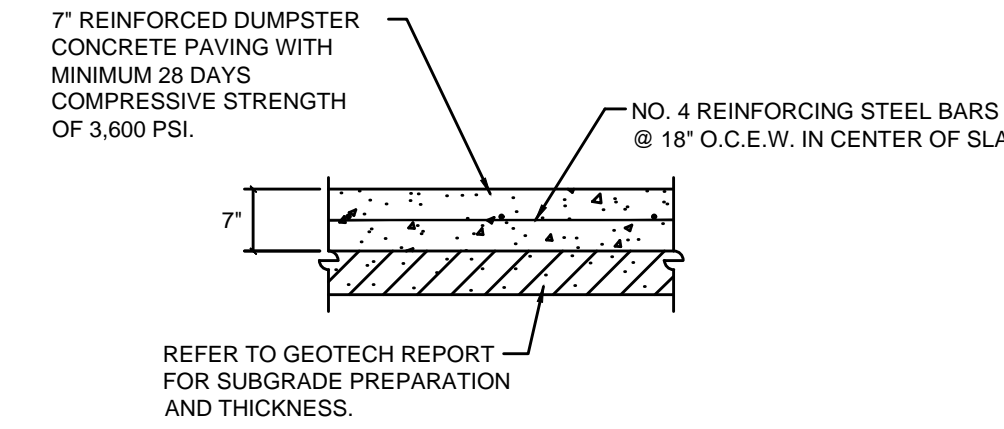
NOTE:
1. CONTRACTOR TO VERIFY WITH CITY REQUIREMENTS. SHOULD THE CITY REQUIREMENTS DIFFER FROM DETAIL, THE CITY REQUIREMENTS WILL SUPERCEDE.
2. CONTRACTOR TO VERIFY REQUIREMENTS FOR INSTALLATION OF PAVEMENT IN FIRE LANE. CONTRACTOR TO INSTALL ACCORDING TO LOCAL, STATE OR GOVERNMENT JURISDICTION.

5" CONCRETE PAVEMENT
N.T.S.



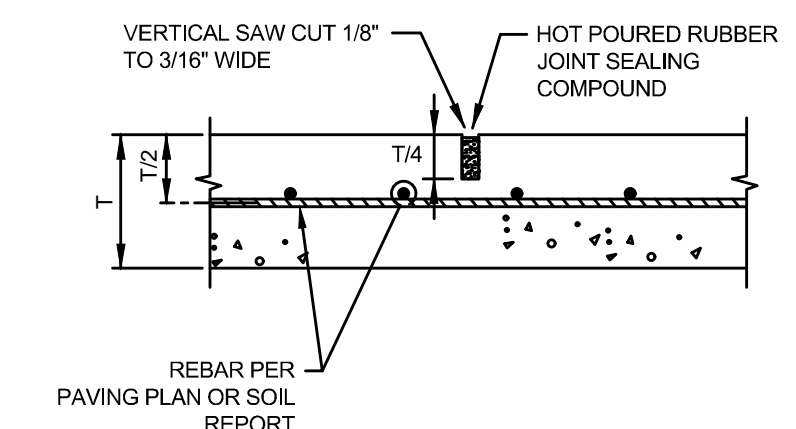
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6" CONCRETE PAVEMENT
N.T.S.

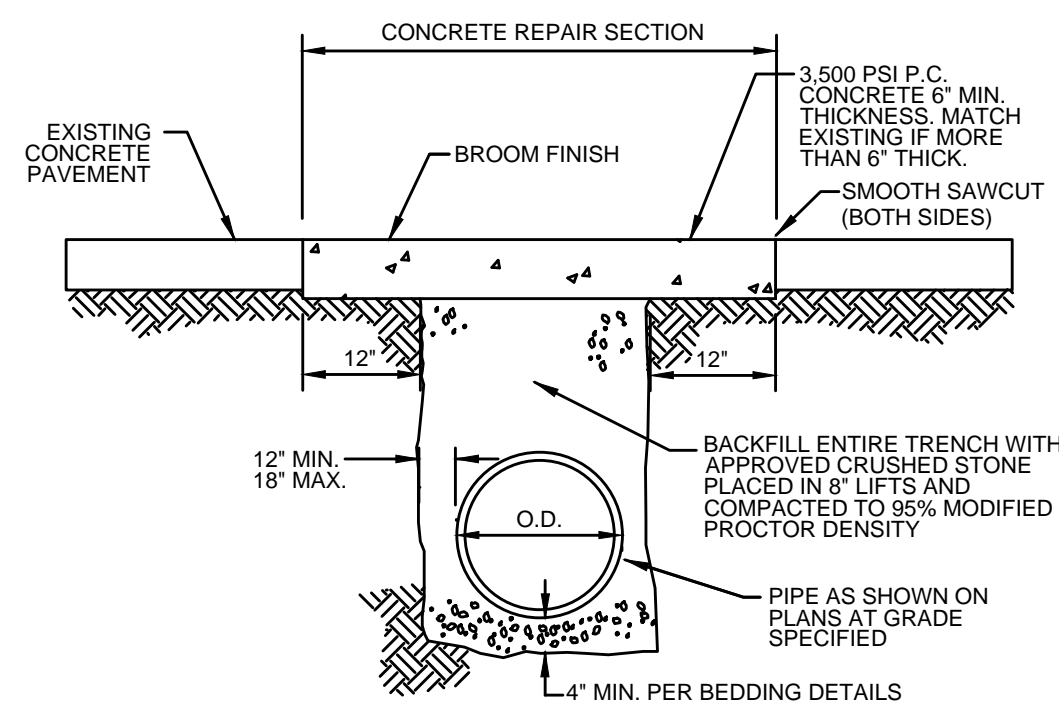


NOTE:
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7" CONCRETE PAVEMENT
N.T.S.



TYPICAL SAW CUT DETAIL
N.T.S.

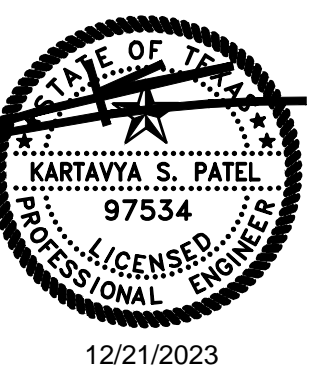


CONCRETE STREET OR DRIVE CUT/REPAIR DETAIL
N.T.S.



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Planning | Civil Engineering | Construction Management

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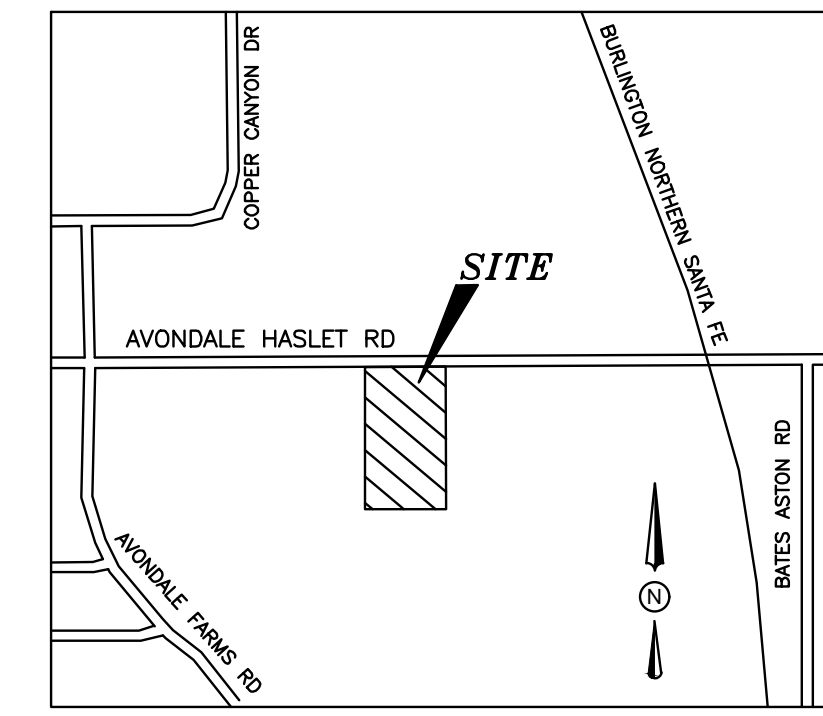
PAVING DETAILS
SHERWIN WILLIAMS
2101 AVONDALE HASLETT ROAD
VISTA CROSSROADS ADDITION BLOCK 2, LOT 4
CITY OF FORT WORTH
TARRANT COUNTY, TEXAS

DATE	PROJECT
12/21/23	049-23
P.E.	DESIGN
KP	JZ

SHEET #
C-7.1



0 50 100 Feet



VICINITY MAP
N.T.S.

IRRIGATION SERVICE
INSTALL:
1-1" IRRIGATION METER
TO BE INSTALLED BY CITY
1-RPZ BACK FLOW PREVENTER

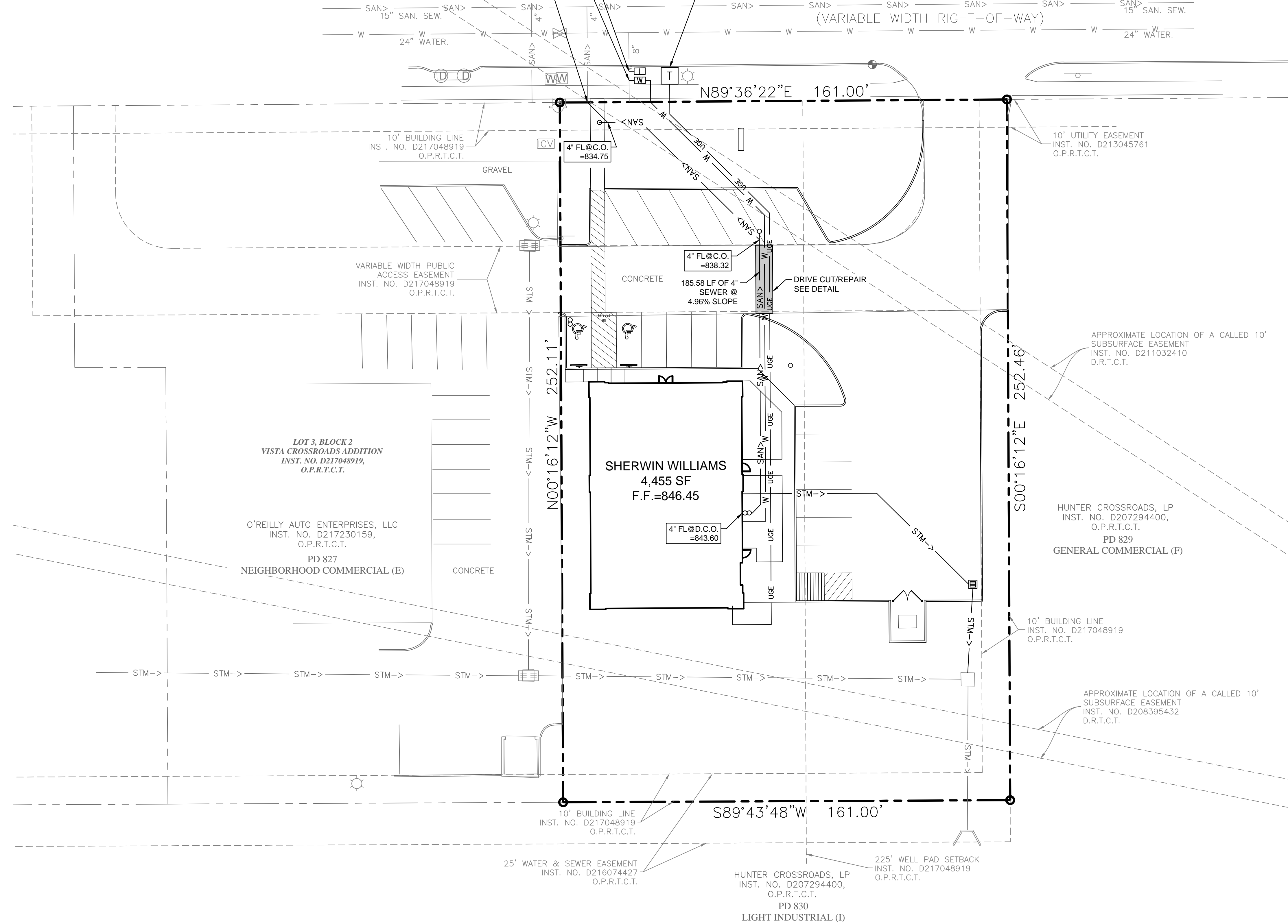
DOMESTIC SERVICE
INSTALL:
1-1" DOMESTIC METER
TO BE INSTALLED BY CITY
1-RPZ BACK FLOW PREVENTER
1-187 L.F. 1" DOM. WATER TO
THE BUILDING

CONNECT TO EXISTING 4"
SANITARY SEWER STUB OUT
INSTALL:
EX. FL=834.24
BASED ON FORT WORTH PLANS
PROJECT # S-1612-08 W.O. # 56
FIELD VERIFY & ADJUST
PROP. 4" FL= MATCH EXISTING

ELECTRIC SERVICE BY SERVICE
PROVIDER. GC TO INSTALL 1-4"
CONDUIT AND SECONDARY WIRE
FROM TRANSFORMER TO BUILDING.
COORDINATE W/LOCAL SERVICE
PROVIDER FOR TYPE OF
TRANSFORMER.

AVONDALE HASLET ROAD

(VARIABLE WIDTH RIGHT-OF-WAY)



EXISTING LEGEND	
--- BOUNDARY LINE	--- WATER VALVE
- - - ADJOINER BOUNDARY LINE	--- TRAFFIC SIGNAL BOX
- - - EASEMENT LINE (AS NOTED)	--- GAS SIGN MARKER
--- WATER LINE	--- WATER METER
--- SANITARY SEWER LINE	--- ELECTRIC PEDESTAL
--- STORM DRAIN LINE (AS NOTED)	--- TELEPHONE MANHOLE
--- OVERHEAD ELECTRIC LINE	--- STORM MAN HOLE
--- GAS LINE	--- LIGHT POLE
--- UNDERGROUND FIBER OPTIC LINE	--- POWER POLE
--- SIGN	--- BENCH MARK
--- SET IRON ROD (AS NOTED)	--- CONTROL MONUMENT
--- FOUND IRON ROD (AS NOTED)	--- SANITARY SEWER CLEANOUT
--- "X" CUT FOUND	--- OFFICIAL PUBLIC RECORDS
--- "X" CUT SET	--- BOWIE COUNTY, TEXAS
--- FIRE HYDRANT	--- DEED RECORDS
--- SANITARY SEWER MAN HOLE	--- BOWIE COUNTY, TEXAS
	--- UNDERGROUND UTILITIES (SUE)

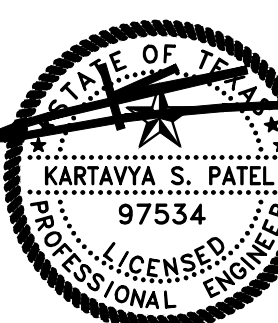
UTILITY LEGEND	
--- UNDERGROUND TELEPHONE LINE	--- UGT
--- UNDERGROUND ELECTRIC LINE	--- UGE
--- GAS LINE	--- G
--- SANITARY SEWER LINE	--- SAN
--- WATER MAIN	--- W
--- DOMESTIC WATER LINE	--- D
--- STORM LINE	--- STM
--- STORM SEWER MANHOLE	--- (Symbol)
--- STORM SEWER CLEANOUT	--- (Symbol)
--- SANITARY SEWER MANHOLE	--- (Symbol)
--- SANITARY SEWER CLEANOUT	--- (Symbol)
--- SANITARY SEWER DOUBLE CLEANOUT	--- (Symbol)
--- SANITARY SEWER SAMPLE PORT	--- (Symbol)
--- GREASE TRAP	--- (Symbol)
--- WATER METER	--- (Symbol)
--- IRRIGATION METER	--- (Symbol)
--- GAS METER	--- (Symbol)
--- FIRE HYDRANT	--- (Symbol)
--- FIRE DEPARTMENT CONNECTION-FDC	--- (Symbol)
--- TRANSFORMER	--- (Symbol)
--- LIGHT POLE	--- (Symbol)
--- POWER POLE	--- (Symbol)

EASEMENT/SETBACK LEGEND	
--- BUILDING SET BACK	--- B.S.
--- LANDSCAPE SETBACK	--- L.S.
--- BUILDABLE AREA SF	--- B.A.
--- PRIVATE WALL AND WALL MAINTENANCE EASEMENT	--- P.W.M.E.
--- PRIVATE FENCE AND FENCE MAINTENANCE EASEMENT	--- P.F.M.E.
--- SIDEWALK EASEMENT	--- S.E.
--- ELECTRICAL EASEMENT	--- E.E.
--- UTILITY EASEMENT	--- U.E.



TX PE FIRM #11525
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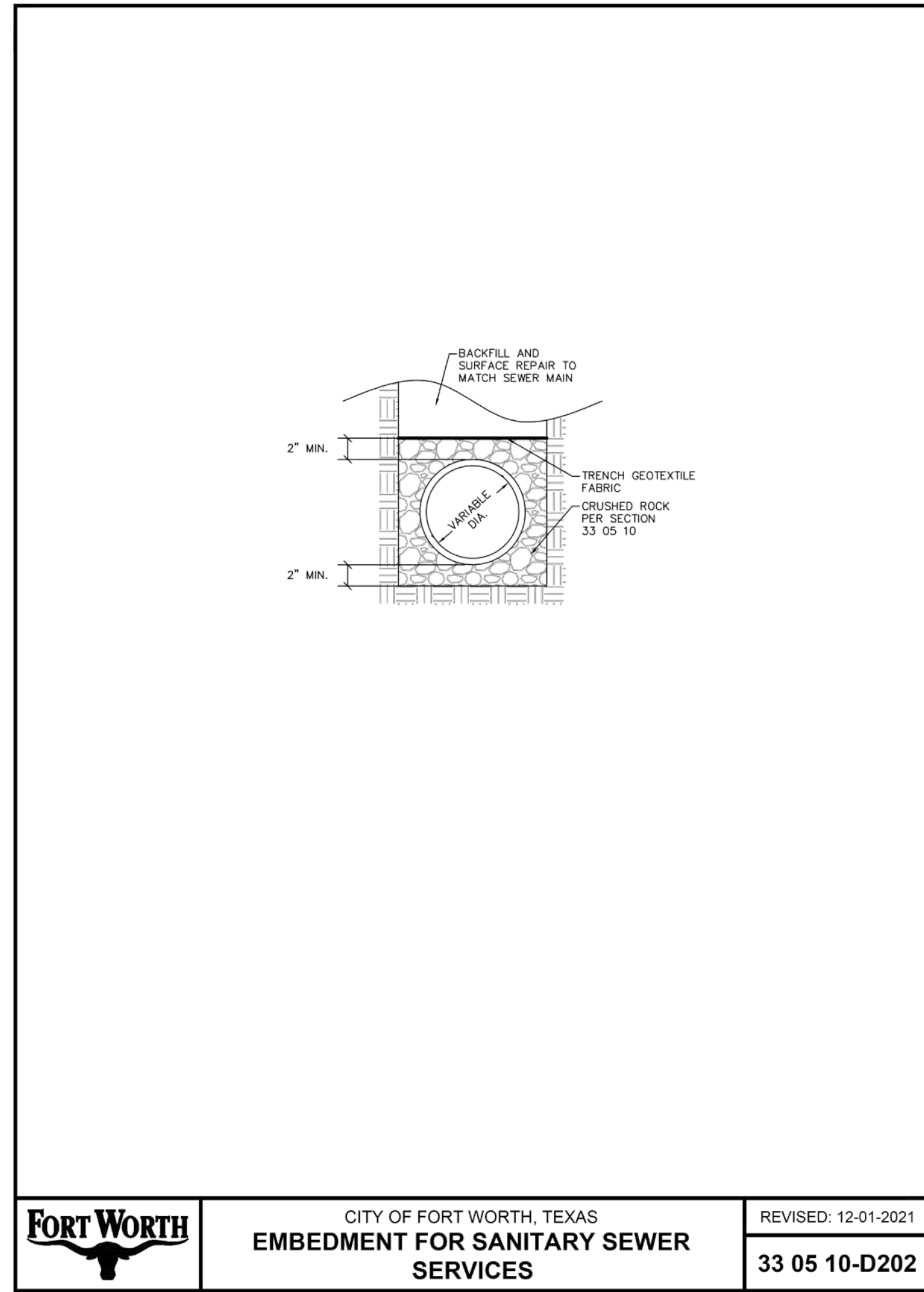
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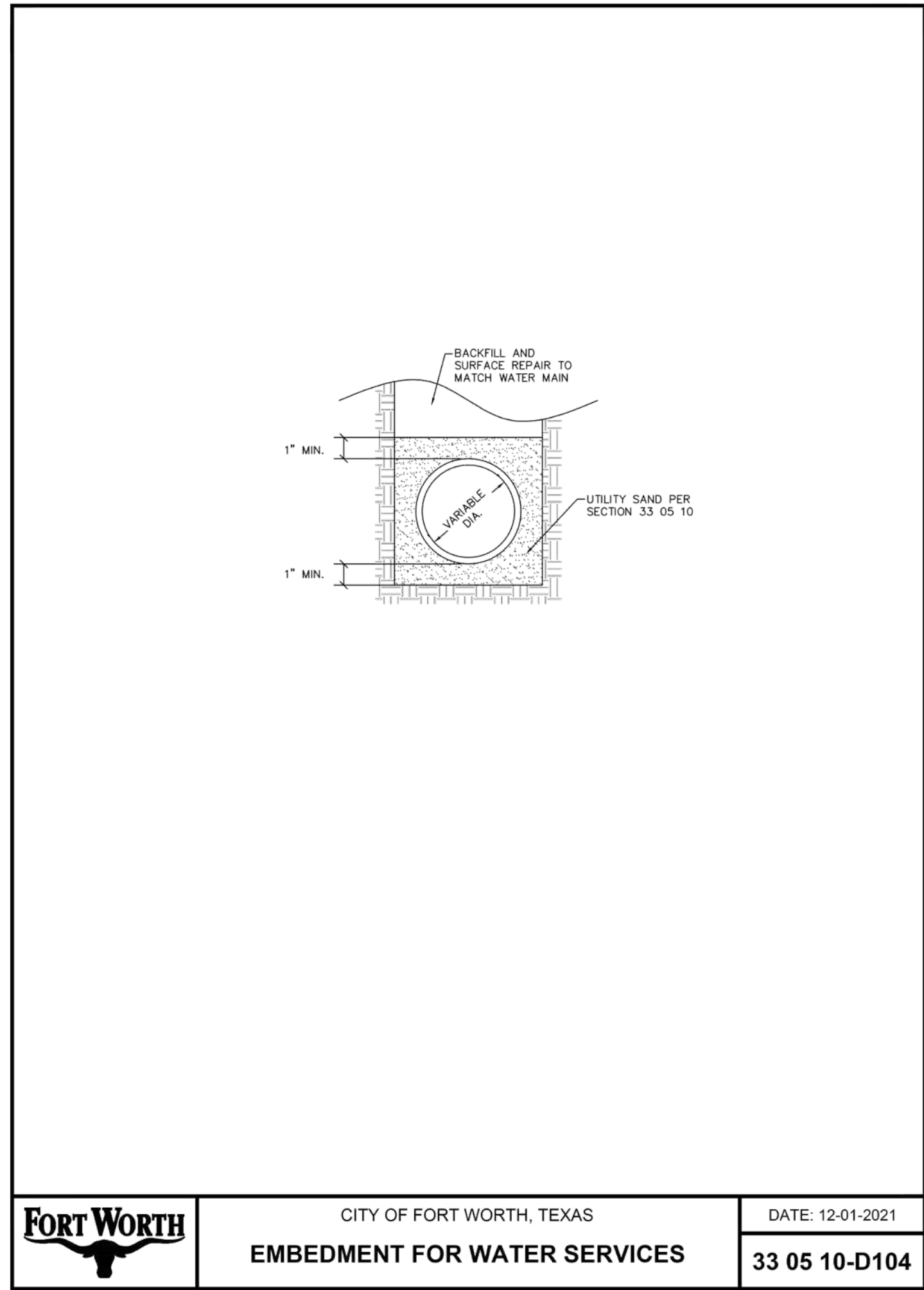
UTILITY PLAN
SHERWIN WILLIAMS
2101 AVONDALE HASLET ROAD
VISTA CROSSROADS ADDITION BLOCK 2, LOT 4
CITY OF FORT WORTH
TARRANT COUNTY, TEXAS

DATE	PROJECT
12/21/23	049-23
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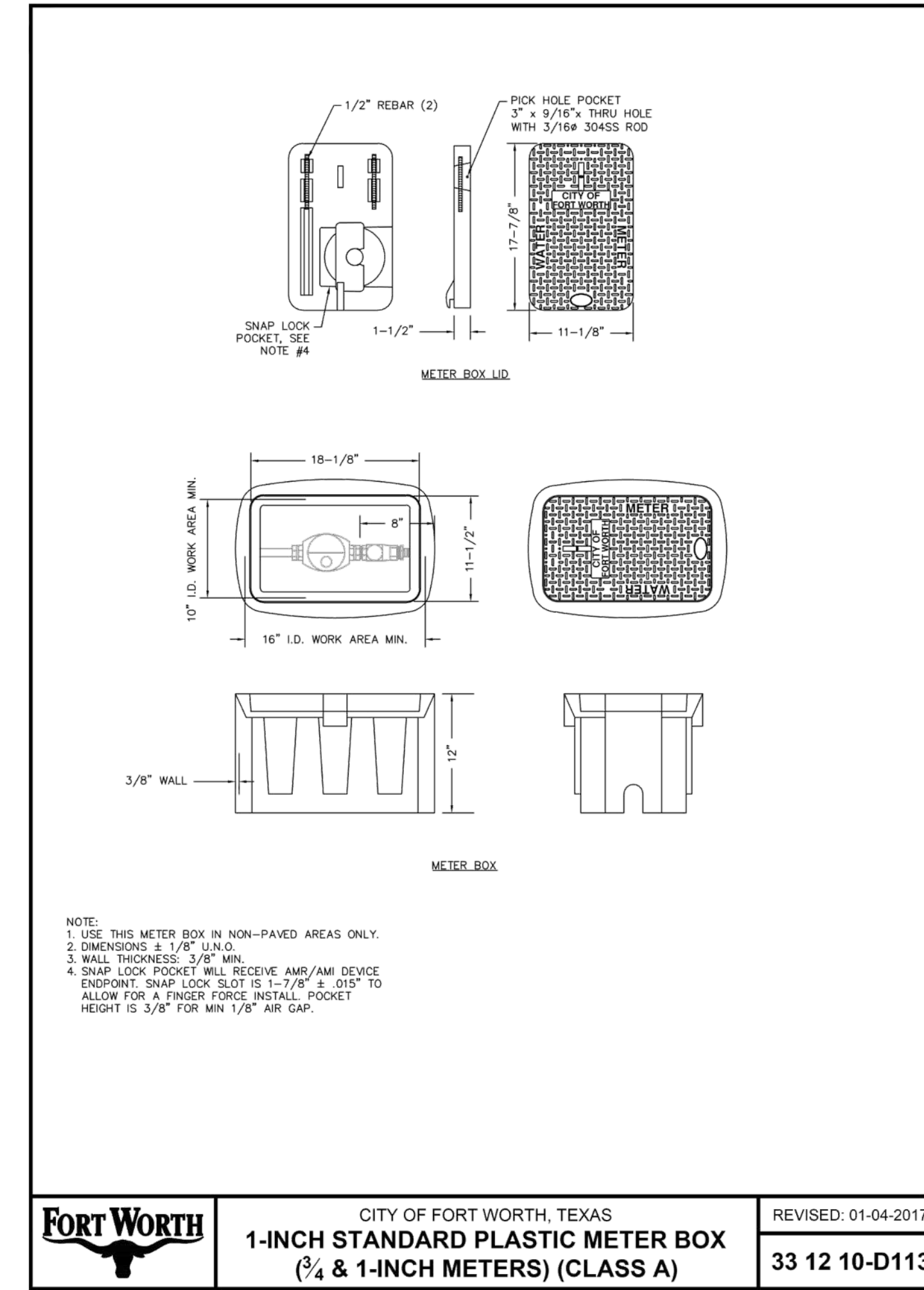
SHEET #
C-8.0



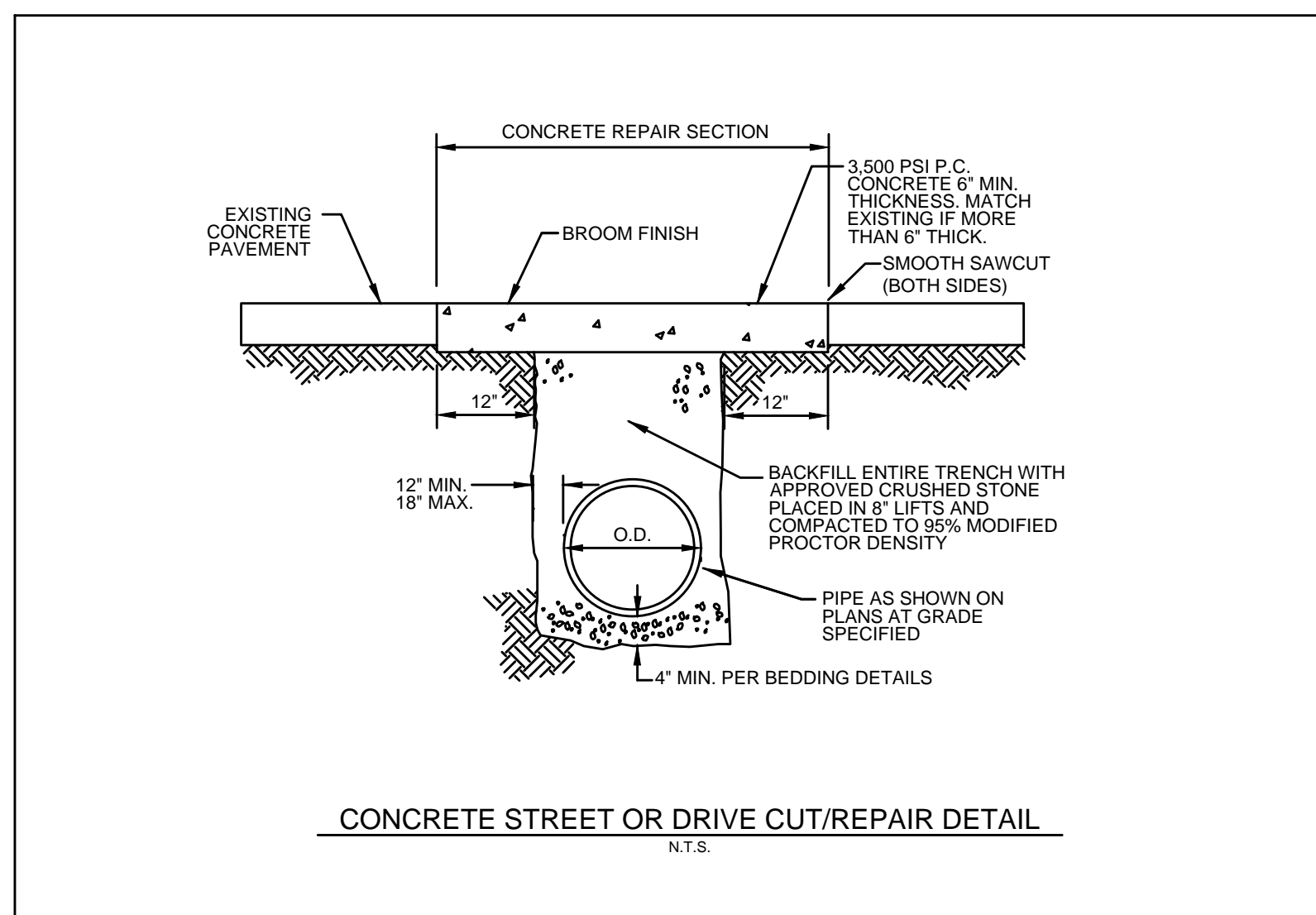
FORT WORTH CITY OF FORT WORTH, TEXAS
EMBEDMENT FOR SANITARY SEWER SERVICES
 REVISED: 12-01-2021
33 05 10-D202



FORT WORTH CITY OF FORT WORTH, TEXAS
EMBEDMENT FOR WATER SERVICES
 DATE: 12-01-2021
33 05 10-D104



FORT WORTH CITY OF FORT WORTH, TEXAS
1-INCH STANDARD PLASTIC METER BOX (3/4 & 1-INCH METERS) (CLASS A)
 REVISED: 01-04-2017
33 12 10-D113

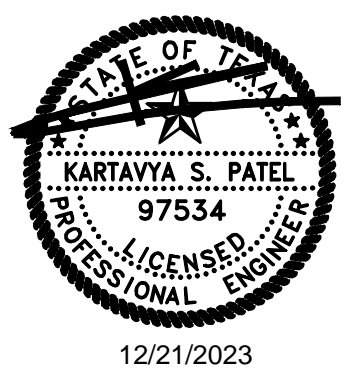


CONCRETE STREET OR DRIVE CUT/REPAIR DETAIL
 N.T.S.



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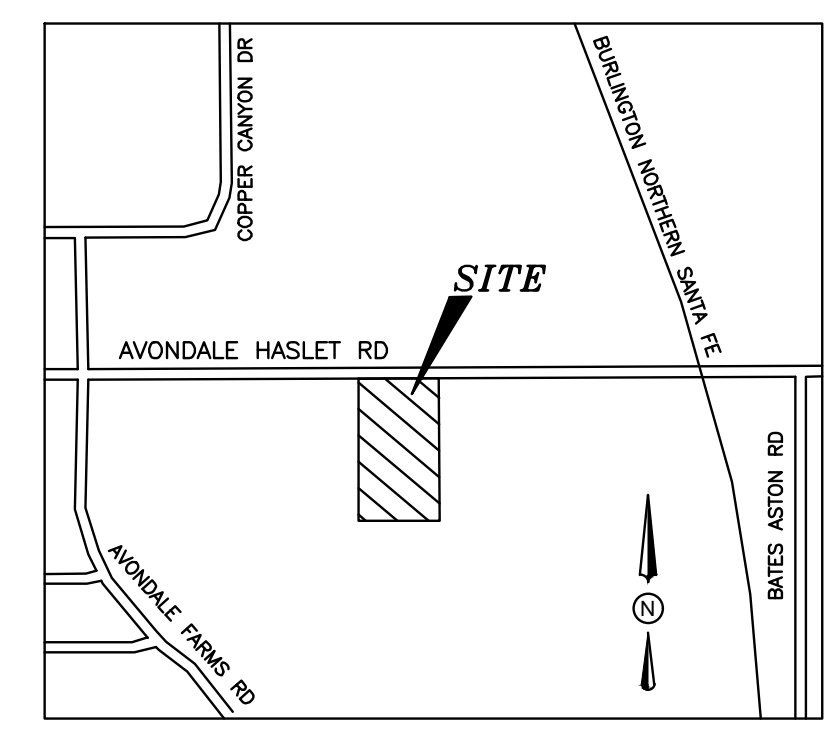
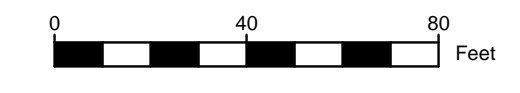
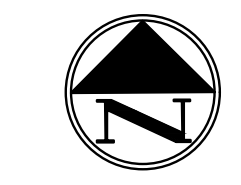
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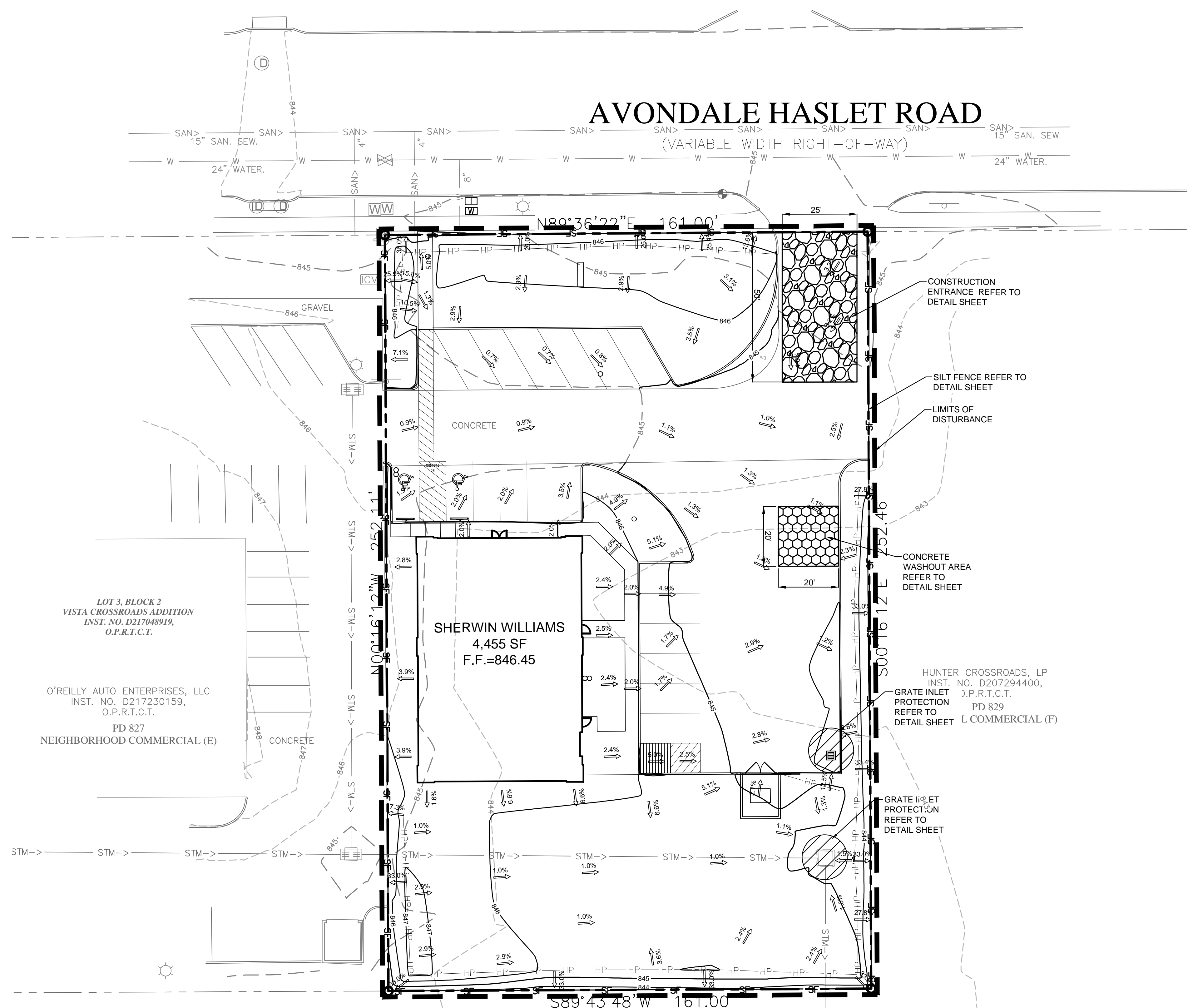
UTILITY DETAILS
 SHERWIN WILLIAMS
 2101 AVONDALE HASLET ROAD
 VISTA CROSSROADS ADDITION BLOCK 2, LOT 4
 CITY OF FORT WORTH
 TARRANT COUNTY, TEXAS

DATE	PROJECT
12/21/23	049-23
P.E.	DESIGN
KP	JZ

SHEET #
C-8.1



VICINITY MAP
N.T.S.



AVONDALE HASLET ROAD
(VARIABLE WIDTH RIGHT-OF-WAY)

LOT 3, BLOCK 2
VISTA CROSSROADS ADDITION
INST. NO. D217048919,
O.P.R.T.C.T.

O'REILLY AUTO ENTERPRISES, LLC
INST. NO. D217230159,
O.P.R.T.C.T.
PD 827
NEIGHBORHOOD COMMERCIAL (E)

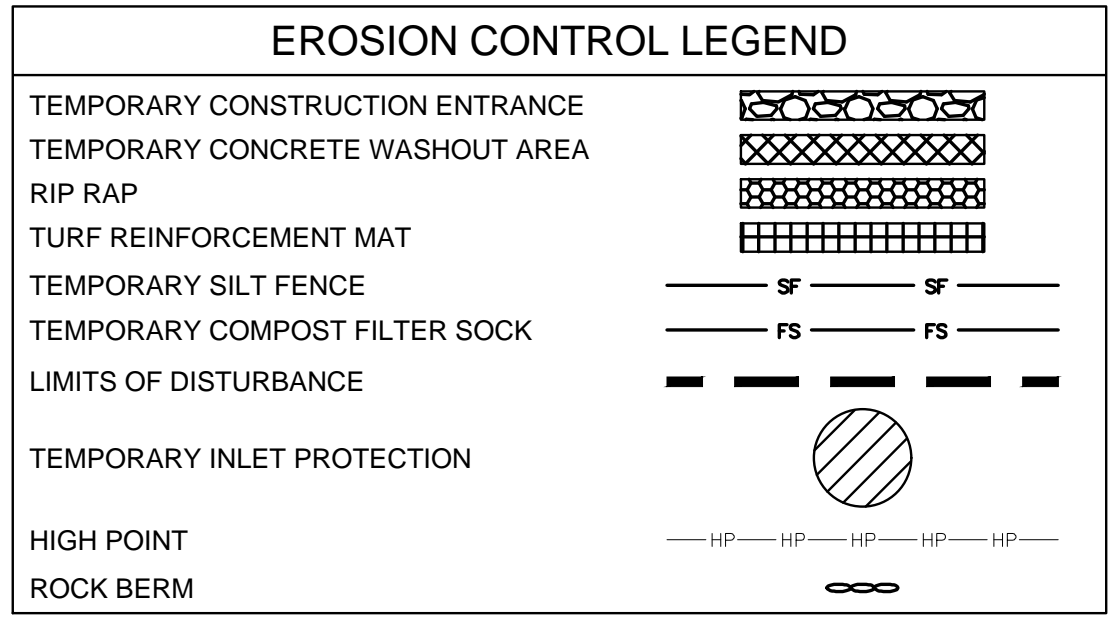
SHERWIN WILLIAMS
4,455 SF
F.F.=846.45

HUNTER CROSSROADS, LP
INST. NO. D207294400,
O.P.R.T.C.T.
PD 829
COMMERCIAL (F)

HUNTER CROSSROADS, LP
INST. NO. D207294400,
O.P.R.T.C.T.
PD 830
LIGHT INDUSTRIAL (I)

EROSION CONTROL GENERAL NOTES

1. EVERY SOIL DISTURBING ACTIVITY SHALL HAVE AN ACCOMPANYING EROSION CONTROL PLAN.
2. THE STORM WATER POLLUTION PREVENTION PLAN (SWP3) SHALL BE READILY AVAILABLE FOR REVIEW BY FEDERAL, STATE, OR LOCAL OFFICIALS.
3. NO SOIL DISTURBING ACTIVITIES WILL OCCUR PRIOR TO THE SWP3 AND ASSOCIATED BEST MANAGEMENT PRACTICES (BMP) BEING FULLY IMPLEMENTED AND THEN INSPECTED.
4. THE CONTRACTOR SHALL COMPLY WITH THE CITY'S STORM WATER ORDINANCE, THE TPDES GENERAL CONSTRUCTION PERMIT TXR150000 AND ANY OTHER STATE AND/OR LOCAL REGULATIONS.
5. THE SITE SHALL BE INSPECTED BY THE CONTRACTOR OR HIS REPRESENTATIVE WEEKLY, AND AFTER ANY MAJOR STORM. ADJUSTMENTS/REPAIRS TO THE EROSION CONTROL MEASURES SHOULD BE MADE AS NEEDED.
6. CONTRACTOR SHALL VEGETATE ALL DISTURBED AREAS IMMEDIATELY UPON COMPLETION OF GRADING ACTIVITIES. FINAL ACCEPTANCE OF A SITE SHALL BE CONTINGENT UPON VEGETATION BEING ESTABLISHED IN ALL DISTURBED AREAS.
7. ADEQUATE MEASURES SHALL BE TAKEN TO PREVENT EROSION. IN THE EVENT THAT SIGNIFICANT EROSION OCCURS AS A RESULT OF CONSTRUCTION THE CONTRACTOR SHALL RESTORE THE ERODED AREA TO ORIGINAL CONDITION OR BETTER.
8. THE CONCRETE WASHOUT AREA IS TO BE USED AS A VEHICLE WASH DOWN AREA FOR DEBRIS AND SOIL REMOVAL PRIOR TO EXITING THE SITE.



EROSION CONTROL SUMMARY

PROJECT DESCRIPTION: SITE GRADING, CONSTRUCTION OF PARKING LOT, UNDERGROUND AND ABOVE GROUND UTILITIES & CONSTRUCTION OF PROPOSED BUILDING.

SEQUENCE OF ACTIVITIES: THE CONTRACTOR WILL SCHEDULE THE PROJECT IN A SERIES OF PHASES. IN GENERAL, THE SEQUENCE OF THESE PHASES WILL CONSIST OF:
 1. INSTALL EROSION CONTROL BMP'S.
 2. BEGIN EARTHWORK.
 3. INSTALL WET AND DRY UTILITIES.
 4. INSTALL STORM SEWER LINES AND INLETS.
 5. BEGIN SITE GRADING.
 6. INSTALL CURBS, DRIVEWAY AND PARKING LOT.
 7. POUR BUILDING FOUNDATION PAD.
 8. BEGIN VERTICAL BUILDING CONSTRUCTION.
 9. INSTALL TREES, SHRUBS, ETC. AND RESTORE ALL DISTURBED VEGETATION.
 10. REMOVAL OF EXISTING EROSION CONTROL BMP'S & INSTALLATION OF PERMANENT EROSION CONTROL BMP'S.

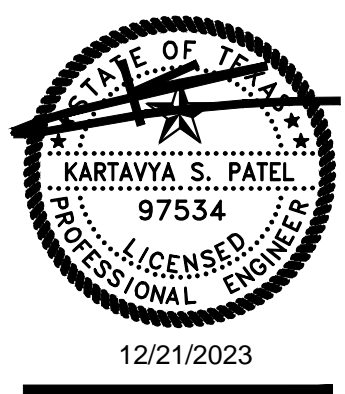
SOIL DISTURBING ACTIVITIES: SOIL DISTURBING ACTIVITIES WILL INCLUDE CLEARING & GRUBBING, GRADING, TRENCHING IN PREPARATION FOR INSTALLING UTILITIES, BUILDING PAD, PARKING LOT, EROSION & SEDIMENTATION CONTROLS AND TOPSOIL WORK FOR FINAL PLANTING AND SEEDING.

TOTAL PROJECT AREA: 0.932 ACRES
 TOTAL AREA DISTURBED: 0.932 ACRES

EROSION & SEDIMENT CONTROLS

- SOIL STABILIZATION PRACTICES:**
 SELECT T = TEMPORARY OR P = PERMANENT (AS APPLICABLE)
- MULCHING (HAY OR STRAW)
 - BUFFER ZONES
 - P PLANTING
 - T SEEDING
 - P SODDING
 - PRESERVATION OF NATURAL RESOURCES
 - FLEXIBLE CHANNEL LINER
 - RIGID CHANNEL LINER
 - SOIL RETENTION BLANKET
 - COMPOST MANUFACTURED TOPSOIL
 - P EROSION CONTROL BLANKET

NO.	DATE	DESCRIPTION
1	12-21-23	1ST SUBMITTAL



12/21/2023

EROSION CONTROL PLAN
 SHERWIN WILLIAMS
 2101 AVONDALE HASLET ROAD
 VISTA CROSSROADS ADDITION BLOCK 2, LOT 4
 CITY OF FORT WORTH
 TARRANT COUNTY, TEXAS

DATE	PROJECT
12/21/23	049-23
P.E.	DESIGN
KP	JZ

SHEET #
C-9.0

USAGE NOTES:

- ANCHORING STAKES SHALL BE SIZED, SPACED, AND BE OF A MATERIAL THAT EFFECTIVELY SECURES THE FILTER SOCK.
- STAKE SPACING SHALL BE A MAXIMUM OF THREE FEET.
- OVERLAP ENDS OF SOCK PER MANUFACTURER'S RECOMMENDATIONS. (1 MIN. 3 MAX.)
- USE 8" TO 12" DIA. SOCK ON CURBSIDE IN TRAFFIC AREAS.
- USE 12" - 18" DIA. SOCK IN NON-TRAFFIC AREAS OR AREAS WHERE SAFETY IS NOT A CONCERN.

DESIGN CRITERIA:

COMPOST FILTER SOCKS ARE DESIGNED TO RETAIN SEDIMENT TRANSPORTED IN SHEET FLOW FROM DISTURBED AREAS. COMPOST FILTER SOCKS PERFORM THE SAME FUNCTION AS SILT FENCE. ALLOW A HIGHER FLOW RATE, AND ARE USUALLY FASTER AND CHEAPER TO INSTALL. WHERE ALL RUNOFF IS TO BE TREATED BY THE COMPOST FILTER SOCK THE MAXIMUM SLOPE LENGTH BEHIND THE COMPOST FILTER SOCK SHALL NOT EXCEED THOSE SHOWN IN TABLE 1. THE DRAINAGE AREA SHALL NOT EXCEED 1/4 ACRE FOR EVERY 100 FT OF COMPOST FILTER SOCK.

THE SEDIMENT AND POLLUTANT REMOVAL PROCESS CHARACTERISTIC TO COMPOST FILTER SOCKS COMBINES BOTH FILTERING AND DEPOSITION FROM SETTLING SOLIDS. THIS IS DIFFERENT THAN METHODS THAT RELY ON PONDING FOR DEPOSITION OF SOLIDS FOR SEDIMENT CONTROL, SUCH AS SILT FENCE. PONDING OCCURS WHEN WATER FLOWING TO THE COMPOST FILTER SOCK ACCUMULATES FASTER THAN THE HYDRAULIC FLOW THROUGH RATE OF THE COMPOST FILTER SOCK. HYDRAULIC FLOW-THROUGH RATES FOR COMPOST FILTER SOCKS ARE 50% GREATER THAN SILT FENCE FILTER FABRIC. GREATER HYDRAULIC FLOW-THROUGH RATES REDUCE PONDING. COMPOST FILTER SOCKS SHALL MEET THE NETTING

SPECIFICATIONS IN TABLE 22. COMPOST FILTER SOCKS SHALL MEET THE SPECIFICATIONS IN TABLE 3. COMPOST USED IN COMPOST FILTER SOCKS SHALL MEET THE SPECIFICATION DESCRIBED UNDER COMPOST FILTER MEDIA SPECIFICATIONS. A 12 INCH DIAMETER COMPOST FILTER SOCK SHALL BE USED ON DEVELOPMENTS WHERE THE LIFE OF THE PROJECT IS GREATER THAN OR EQUAL TO SIX MONTHS. A 12 INCH DIAMETER COMPOST FILTER SOCK MAY ALSO BE USED ON MINOR PROJECTS, SUCH AS RESIDENTIAL HOME SITES OR SMALL COMMERCIAL DEVELOPMENTS.

COMPOST FILTER MEDIA SPECIFICATIONS:

COMPOST USED FOR COMPOST FILTER SOCK FILLER MATERIAL (FILTER MEDIA) SHALL BE WEED FREE AND DERIVED FROM A WELL-DECOMPOSED SOURCE OF ORGANIC MATTER. THE COMPOST SHALL BE PRODUCED USING AN AEROBIC COMPOSTING PROCESS MEETING CFR 503 REGULATIONS INCLUDING TIME AND TEMPERATURE DATA. THE COMPOST SHALL BE FREE OF ANY REFUSE, CONTAMINANTS OR OTHER MATERIALS TOXIC TO PLANT GROWTH. NON-COMPOSTED PRODUCTS WILL NOT BE ACCEPTED. TEST METHODS FOR THE ITEMS BELOW SHOULD FOLLOW US COMPOSTING COUNCIL TEST METHODS FOR THE EXAMINATION OF COMPOSTING AND COMPOST GUIDELINES FOR LABORATORY PROCEDURES:

- PH 5.0-8.0 IN ACCORDANCE WITH TMECC 04.11-A, "ELECTROMETRIC PH DETERMINATIONS FOR COMPOST"
- PARTICLE SIZE - 90% PASSING A 2 IN (50MM) SIEVE AND A MAXIMUM OF 40% PASSING A 3/4 IN (19.5MM) SIEVE, IN ACCORDANCE WITH TMECC 02.02-B, "SAMPLE SIEVING FOR AGGREGATE SIZE CLASSIFICATION". (NOTE- IN THE FIELD,

PRODUCT COMMONLY IS BETWEEN 1/2 IN (12.5MM) AND 2 IN (50MM) PARTICLE SIZE.)

C. MOISTURE CONTENT OF LESS THAN 60% IN ACCORDANCE WITH STANDARDIZED TEST METHODS FOR MOISTURE DETERMINATION.

D. MATERIAL SHALL BE RELATIVELY FREE (<1% BY DRY WEIGHT) OF INERT OF FOREIGN MAN MADE MATERIALS.

E. A SAMPLE SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO BEING USED AND MUST COMPLY WITH ALL LOCAL, STATE AND FEDERAL REGULATIONS.

CONSTRUCTION SPECIFICATIONS:

THE COMPOST FILTER SOCK SHALL BE INSTALLED ACCORDING TO THIS SPECIFICATION, AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

- COMPOST FILTER SOCKS SHOULD BE INSTALLED PARALLEL TO THE BASE OF THE SLOPE OR OTHER DISTURBED AREA. IN EXTREME CONDITIONS (I.E., 2:1 SLOPES), A SECOND COMPOST FILTER SOCK SHALL BE CONSTRUCTED AT THE TOP OF THE SLOPE.
- STAKES SHALL BE INSTALLED THROUGH THE MIDDLE OF THE COMPOST FILTER SOCK ON 10 FT (3M) CENTERS, USING 2 IN (50MM) BY 2 IN (50MM) BY 3 FT (1M) WOODEN STAKES. IN THE EVENT STAKING IS NOT POSSIBLE, I.E., WHEN COMPOST FILTER SOCKS ARE USED ON PAVEMENT, HEAVY CONCRETE BLOCKS SHALL BE USED BEHIND THE COMPOST FILTER SOCKS TO HELP STABILIZE DURING RAINFALL/RUNOFF EVENTS.
- STAKING DEPTH FOR SAND AND SILT LOAM SOILS SHALL BE 12 IN (300MM), AND 8 IN (200MM) FOR CLAY SOILS.
- LOOSE COMPOST MAY BE BACKFILLED ALONG THE UPSLOPE SIDE OF THE COMPOST FILTER SOCK, FILLING THE SEAM BETWEEN THE SOIL SURFACE AND THE DEVICE, IMPROVING FILTRATION AND SEDIMENT RETENTION.

5. IF THE COMPOST FILTER SOCK IS TO BE LEFT AS A PERMANENT FILTER OR PART OF THE NATURAL LANDSCAPE, IT MAY BE SEEDED AT TIME OF INSTALLATION FOR ESTABLISHMENT OF PERMANENT VEGETATION. THE ENGINEER WILL SPECIFY SEED REQUIREMENTS.

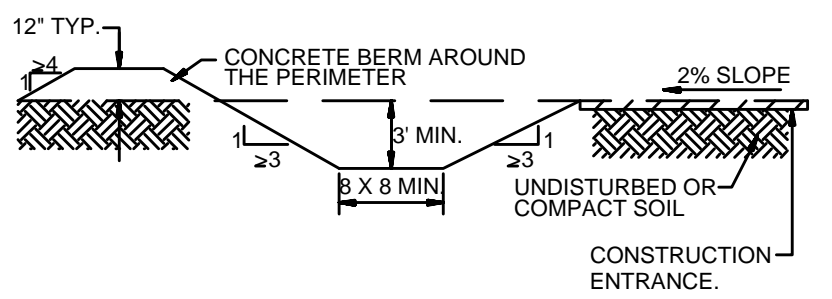
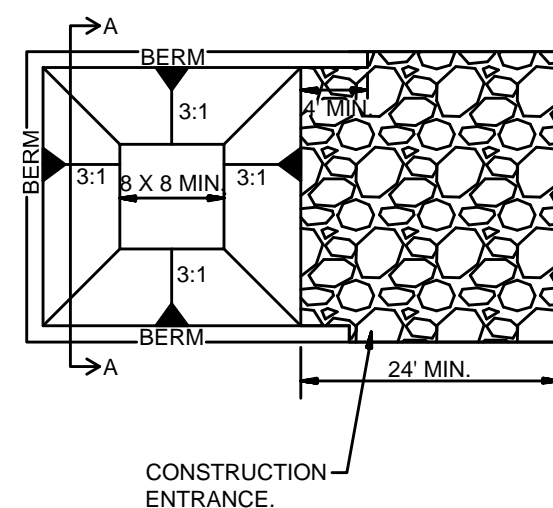
6. COMPOST FILTER SOCKS ARE NOT TO BE USED IN PERENNIAL, EPHEMERAL, OR INTERMITTENT STREAMS.

MAINTENANCE:

SEDIMENT SHALL BE REMOVED ONCE IT HAS ACCUMULATED TO ONE-HALF THE ORIGINAL HEIGHT OF THE BARRIER. COMPOST FILTER SOCKS SHALL BE REPLACED WHENEVER IT HAS DETERIORATED TO SUCH AN EXTENT THAT THE EFFECTIVENESS OF COMPOST FILTER SOCK IS REDUCED. COMPOST FILTER SOCKS SHALL REMAIN IN PLACE UNTIL DISTURBED AREAS HAVE BEEN PERMANENTLY STABILIZED. ALL SEDIMENT ACCUMULATION AT THE COMPOST FILTER SOCK SHALL BE REMOVED AND PROPERLY DISPOSED OF BEFORE THE COMPOST FILTER SOCK IS REMOVED.

NOTES:

- SEE PLAN VIEW FOR CWA INSTALLATION LOCATION.
- DO NOT LOCATE AN UNLINED CWA WITHIN 400' OF ANY NATURAL DRAINAGE PATHWAY OR WATERBODY. DO NOT LOCATE WITHIN 1,000' OF ANY WELLS OR DRINKING WATER SOURCES. IF SITE CONSTRAINTS MAKE THIS WITH INFEASIBLE, OR IF HIGHLY PERMEABLE SOILS EXIST ON SITE, THE CWA MUST BE INSTALLED WITH AN IMPERMEABLE LINER (16 MIL MIN. THICKNESS) OR SURFACE STORAGE ALTERNATIVES USING PREFABRICATED CONCRETE WASHOUT DEVICES OR A LINE ABOVE GROUND STORAGE SHOULD BE USED.
- THE CWA SHALL BE INSTALLED PRIOR TO CONCRETE PLACEMENT ON SITE.
- CWA SHALL INCLUDE FLAT SUBSURFACE PIT THAT IS AT LEAST 8' x 8' FLATTER. THE PIT SHALL BE AT LEAST 3' DEEP.
- BERM SURROUNDING SIDES AND BACK OF THE CWA SHALL HAVE MINIMUM HEIGHT OF 1'.
- VEHICLE TRACKING PAD SHALL BE SLOPED 2% TOWARDS THE CWA.
- SIGNS SHALL BE PLACED AT THE CONSTRUCTION ENTRANCE, AT THE CWA, AND ELSEWHERE AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE CWA TO OPERATORS OF CONCRETE TRUCKS AND PUMP RIGS.
- USE EXCAVATED MATERIAL FOR PERIMETER BERM CONSTRUCTION.
- INSPECT BMPs EACH WORKDAY, AND MAINTAIN IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
- FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
- WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
- THE CWA SHALL BE REPAIRED, CLEANED, OR ENLARGED AS NECESSARY TO MAINTAIN CAPACITY FOR CONCRETE WASTE. CONCRETE MATERIALS, ACCUMULATED IN PIT, SHALL BE REMOVED ONCE THE MATERIALS HAVE REACHED A DEPTH OF 2'.
- CONCRETE WASHOUT WATER, WASTED PIECES OF CONCRETE AND ALL OTHER DEBRIS IN SHALL BE TRANSPORTED FROM THE JOB SITE IN A CONTAINER AND DISPOSED OF PROPERLY.
- THE CWA SHALL REMAIN IN PLACE UNTIL ALL CONCRETE FOR THE PROJECT IS PLACED.
- WHEN THE CWA IS REMOVED, COVER THE DISTURBED AREA WITH TOP SOIL, SEED AND MULCH OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.

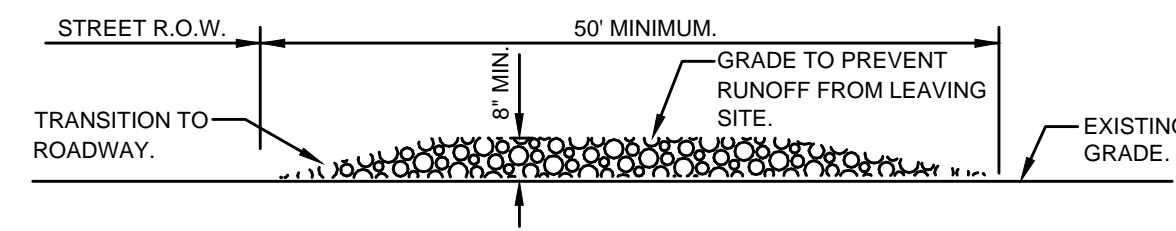
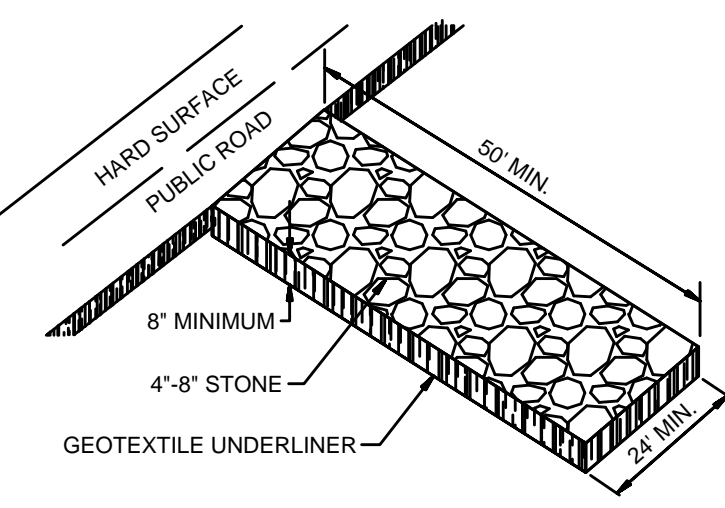


CONCRETE WASHOUT AREA DETAIL
N.T.S.

NOTES:

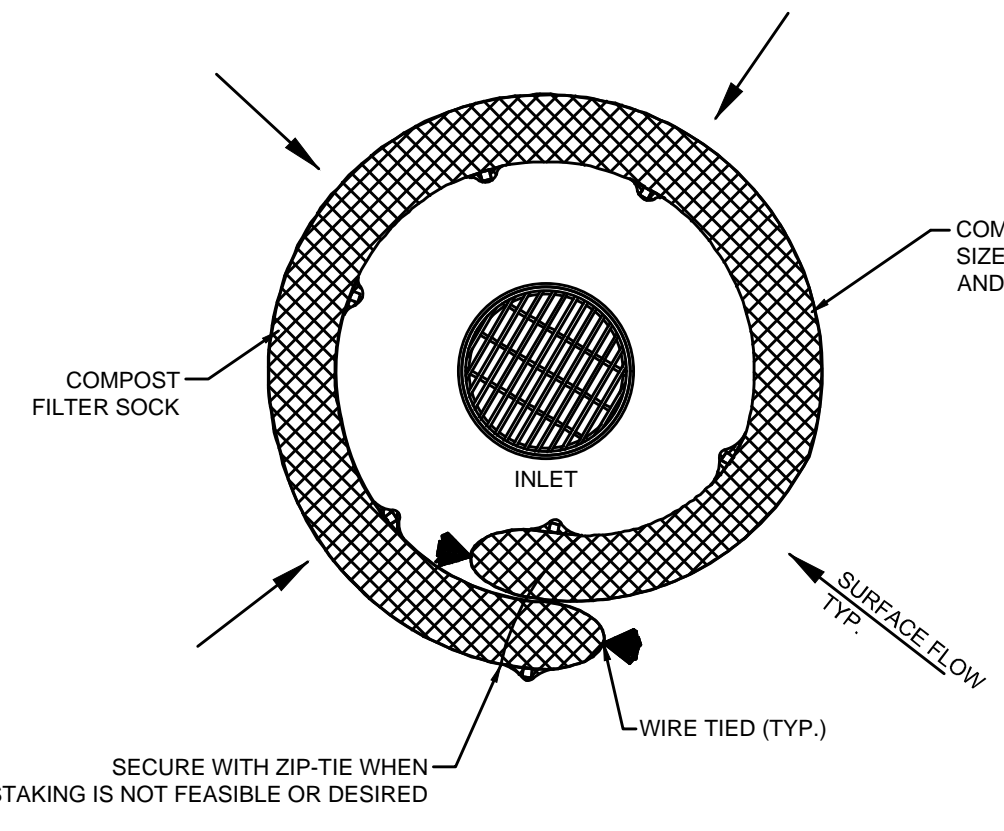
- STABILIZED CONSTRUCTION ENTRANCES SHALL CONFORM TO THE CITY'S CRITERIA MANUAL.
- STONE SIZE SHALL BE 4" - 8" OPEN GRADED ROCK.
- THICKNESS OF CRUSHED STONE PAD TO BE NOT LESS THAN 8".
- LENGTH SHALL BE A MINIMUM OF 50' FROM ACTUAL ROADWAY AND WIDTH NOT LESS THAN FULL WIDTH OF INGRESS/EGRESS.
- ENTRANCE SHALL BE PROPERLY GRADED TO PREVENT RUNOFF FROM LEAVING THE CONSTRUCTION SITE.

THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS OF WAY. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS OF WAY MUST BE REMOVED IMMEDIATELY BY CONTRACTOR. AS NECESSARY, WHEELS MUST BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHT OF WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE WHICH DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATERCOURSE USING APPROVED METHODS.

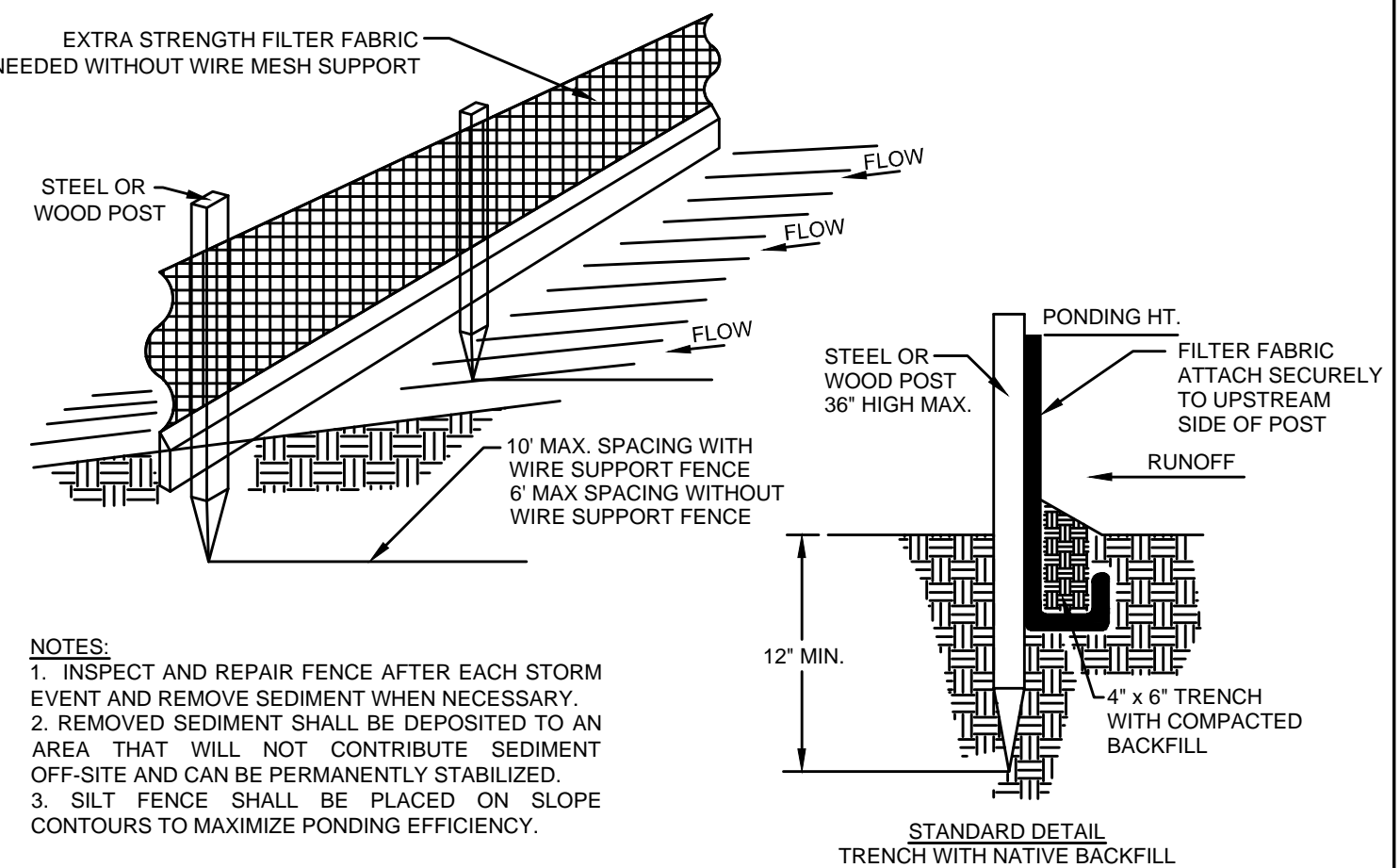


CONSTRUCTION ENTRANCE DETAIL
N.T.S.

COMPOST FILTER SOCK NOTES
N.T.S.



AREA/GRATE INLET PROTECTION DETAIL
N.T.S.



- NOTES:**
- INSPECT AND REPAIR FENCE AFTER EACH STORM EVENT AND REMOVE SEDIMENT WHEN NECESSARY.
 - REMOVED SEDIMENT SHALL BE DEPOSITED TO AN AREA THAT WILL NOT CONTRIBUTE SEDIMENT OFF-SITE AND CAN BE PERMANENTLY STABILIZED.
 - SILT FENCE SHALL BE PLACED ON SLOPE CONTOURS TO MAXIMIZE PONDING EFFICIENCY.

SILT FENCE DETAIL
N.T.S.



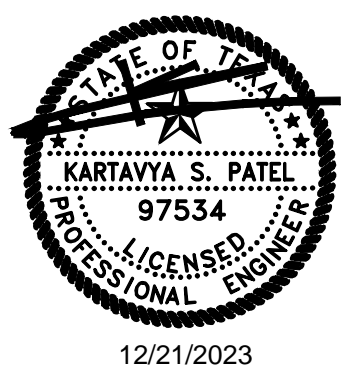
TX PE FIRM #11525

TRIANGLE ENGINEERING LLC

T: 469.331.8566 | F: 469.213.7145 | E: info@triangle-eng.com
W: triangle-eng.com | O: 1782 W. McDermott Drive, TX 75013

Planning | Civil Engineering | Construction Management

NO.	DATE	DESCRIPTION	BY
1	12-21-23	1ST SUBMITTAL	KP

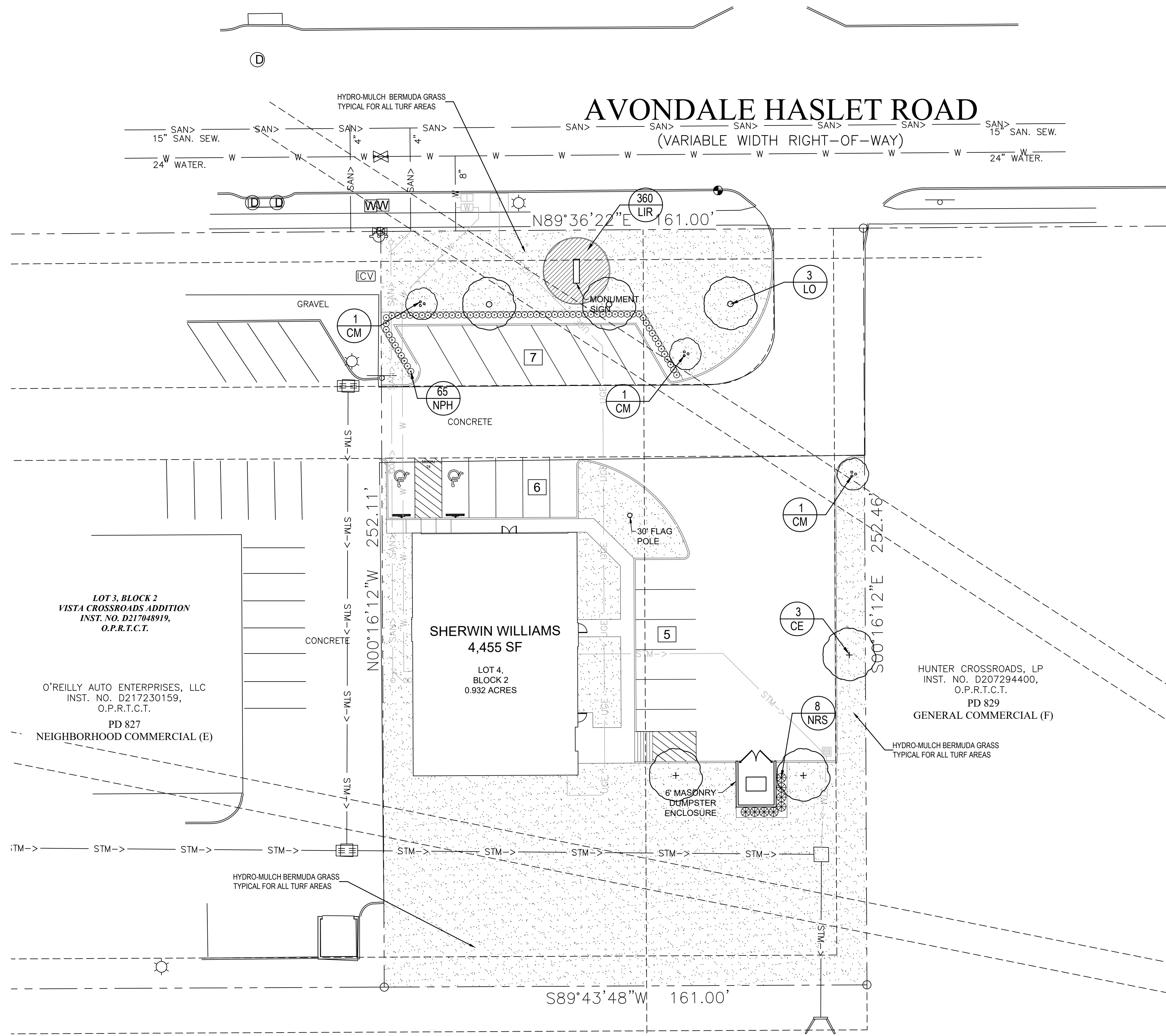


EROSION CONTROL DETAILS

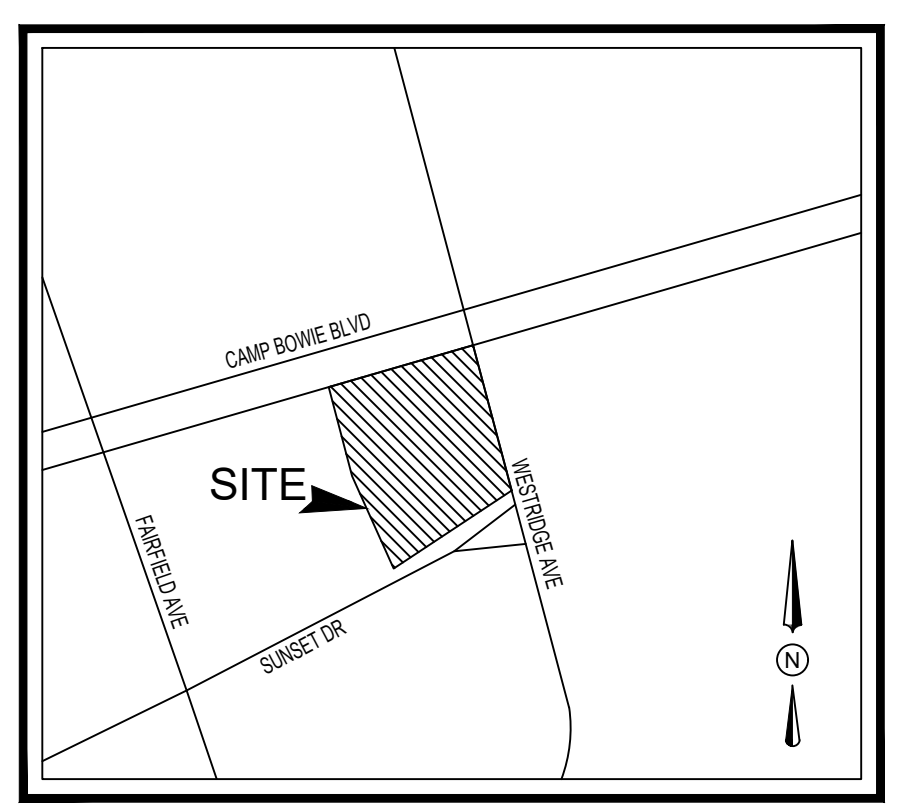
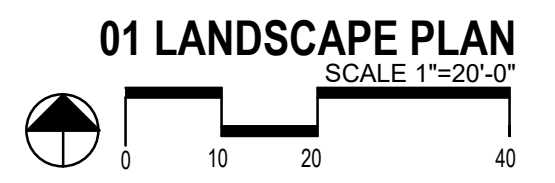
SHERWIN WILLIAMS
2101 AVONDALE HASLET ROAD
VISTA CROSSROADS ADDITION BLOCK 2, LOT 4
CITY OF FORT WORTH
TARRANT COUNTY, TEXAS

DATE	PROJECT
12/21/23	049-23
P.E.	DESIGN
KP	JZ

SHEET #
C-9.1

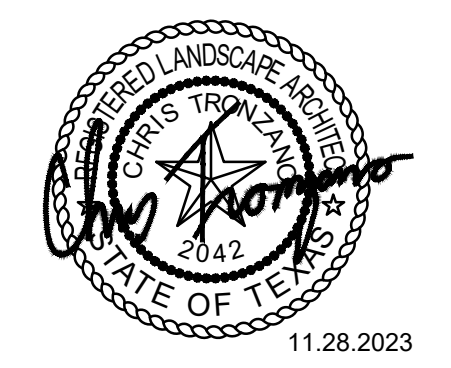


HUNTER CROSSROADS, LP
 INST. NO. D207294400,
 O.P.R.T.C.T.
 PD 830
 LIGHT INDUSTRIAL (I)



VICINITY MAP
 N.T.S.

LANDSCAPE ARCHITECT
 1782 W McDERMOTT DR.
 ALLEN, TEXAS 75013
 (469) 369-4448
 CHRIS@STUDIOGREENSPOT.COM



GENERAL LAWN NOTES

1. FINE GRADE AREAS TO ACHIEVE FINAL CONTOURS INDICATED ON CIVIL PLANS.
2. ADJUST CONTOURS TO ACHIEVE POSITIVE DRAINAGE AWAY FROM BUILDINGS. PROVIDE UNIFORM ROUNDING AT TOP AND BOTTOM OF SLOPES AND OTHER BREAKS IN GRADE. CORRECT IRREGULARITIES AND AREAS WHERE WATER MAY STAND.
3. ALL LAWN AREAS TO RECEIVE SOLID SOD SHALL BE LEFT IN A MAXIMUM OF 1" BELOW FINAL FINISH GRADE. CONTRACTOR TO COORDINATE OPERATIONS WITH ON-SITE CONSTRUCTION MANAGER.
4. IMPORTED TOPSOIL SHALL BE NATURAL, FRIABLE SOIL FROM THE REGION, KNOWN AS BOTTOM AND SOIL, FREE FROM LUMPS, CLAY, TOXIC SUBSTANCES, ROOTS, DEBRIS, VEGETATION, STONES, CONTAINING NO SALT AND BLACK TO BROWN IN COLOR.
5. ALL LAWN AREAS TO BE FINE GRADED, IRRIGATION TRENCHES COMPLETELY SETTLED, AND FINISH GRADE APPROVED BY THE OWNER'S CONSTRUCTION MANAGER OR ARCHITECT PRIOR TO INSTALLATION.
6. ALL ROCKS 3/4" DIAMETER AND LARGER, DIRT CLOUDS, STICKS, CONCRETE SPOOLS, ETC. SHALL BE REMOVED PRIOR TO PLACING TOPSOIL AND ANY LAWN INSTALLATION.
7. CONTRACTOR SHALL PROVIDE (1") ONE INCH OF IMPORTED TOPSOIL ON ALL AREAS TO RECEIVE LAWN.

LANDSCAPE NOTES

1. CONTRACTOR SHALL VERIFY ALL EXISTING AND PROPOSED SITE ELEMENTS AND NOTIFY ARCHITECT OF ANY DISCREPANCIES. SURVEY DATA OF EXISTING CONDITIONS WAS SUPPLIED BY OTHERS.
2. CONTRACTOR SHALL LOCATE ALL EXISTING UNDERGROUND UTILITIES AND NOTIFY ARCHITECT OF ANY CONFLICTS. CONTRACTOR SHALL EXERCISE CAUTION WHEN WORKING IN THE VICINITY OF UNDERGROUND UTILITIES.
3. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL REQUIRED LANDSCAPE AND IRRIGATION PERMITS.
4. CONTRACTOR TO PROVIDE A MINIMUM 2% SLOPE AWAY FROM ALL STRUCTURES.
5. ALL PLANTING BEDS AND LAWN AREAS TO BE SEPARATED BY STEEL EDGING. NO STEEL TO BE INSTALLED ADJACENT TO SIDEWALKS OR CURBS.
6. ALL LANDSCAPE AREAS TO BE 100% IRRIGATED WITH AN UNDERGROUND AUTOMATIC IRRIGATION SYSTEM AND SHALL INCLUDE RAIN AND FREEZE SENSORS.
7. ALL LAWN AREAS TO BE HYDRO-MULCH BERMUDAGRASS, UNLESS OTHERWISE NOTED ON THE DRAWINGS.

HYDROMULCH NOTES

1. ALL LAWN AREAS TO BE HYDROMULCH BERMUDAGRASS, UNLESS NOTED OTHERWISE ON DRAWINGS.
2. CONTRACTOR SHALL SCARIFY, RIP, LOOSEN ALL AREAS TO BE HYDROMULCHED TO A MINIMUM DEPTH OF 4" PRIOR TO TOPSOIL AND HYDROMULCH INSTALLATION.
3. BERMUDAGRASS SEED SHALL BE EXTRA HULLED AND TREATED LAWN TYPE AND SHALL BE DELIVERED TO THE SITE IN ITS ORIGINAL UNOPENED CONTAINER, AND SHALL MEET TEXAS STATE LAW REQUIREMENTS.
4. FIBER: SHALL BE ONE HUNDRED (100%) PERCENT WOOD CELLULOSE FIBER, DELIVERED TO THE SITE IN ITS ORIGINAL UNOPENED CONTAINER. "CONWEB" OR EQUAL.
5. FIBER TACK: SHALL BE DELIVERED TO THE SITE IN ITS ORIGINAL UNOPENED CONTAINER, AND SHALL BE TERRO-TACK ONE, AS MANUFACTURED BY GROWERS, INC., OR EQUAL.
6. HYDROMULCH WITH BERMUDAGRASS SEED AT A RATE OF TWO (2) POUNDS PER ONE THOUSAND (1000) SQUARE FOOT.
7. USE A 4'X8' BATTER BOARD AGAINST ALL BEDS AREAS.
8. IF INSTALLATION OCCURS BETWEEN SEPTEMBER 1 AND APRIL 1, ALL HYDROMULCH AREAS TO BE WINTER RYEGRASS, AT A RATE OF FOUR (4) POUNDS PER ONE THOUSAND (1000) SQUARE FEET. CONTRACTOR SHALL BE REQUIRED TO RE-HYDROMULCH WITH BERMUDAGRASS THE FOLLOWING GROWING SEASON.
9. IN THE EVENT RYE GRASS IS NECESSARY DUE TO TIME OF YEAR INSTALLATION, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO SCALP EXISTING GRASS, BAG CLIPPINGS, AND SCARIFY SOIL TO A DEPTH OF 1" PRIOR TO PERMANENT LAWN GRASS INSTALLATION.
10. ALL LAWN AREAS TO BE HYDROMULCHED, SHALL HAVE ONE HUNDRED (100%) PERCENT COVERAGE PRIOR TO FINAL ACCEPTANCE.
11. CONTRACTOR SHALL MAINTAIN ALL LAWN AREAS UNTIL FINAL ACCEPTANCE. THIS SHALL INCLUDE BUT NOT BE LIMITED TO: MOWING, WATERING, WEEDING, CULTIVATING, CLEANING, AND REPLACING DEAD OR BARE AREAS TO KEEP PLANTS IN A VIGOROUS, HEALTHY CONDITION.
12. CONTRACTOR SHALL GUARANTEE ESTABLISHMENT OF AN ACCEPTABLE TURF AREA AND SHALL PROVIDE REPLACEMENT FROM LOCAL SUPPLY AS NECESSARY.

PLANT MATERIAL SCHEDULE -

TREES					
TYPE	QTY	COMMON NAME	BOTANICAL NAME	SIZE	REMARKS
LO	3	Live Oak	<i>Lagerstroemia indica</i>	3" cal.	container, 12" ht., 5' spread 5' clear trunk
CE	3	Cedar Elm	<i>Ulmus crassifolia</i>	3" cal.	container, 12" ht., 5' spread 5' clear trunk
CM	3	Crepe Myrtle	<i>Lagerstroemia indica</i>	2" cal.	container, 8' ht., tree form
SHRUBS					
TYPE	QTY	COMMON NAME	BOTANICAL NAME	SIZE	REMARKS
NPH	65	Needlepoint Holly	<i>Ilex x cornuta 'Needlepoint'</i>	5 gal.	container, 24" ht., 20" spread
NRS	8	Nellie R. Stevens	<i>Ilex x 'Nellie R. Stevens'</i>	5 gal.	container, 24" ht., 24" spread
GROUNDCOVERS					
TYPE	QTY	COMMON NAME	BOTANICAL NAME	SIZE	REMARKS
LIR	360	Liriope	<i>Liriope muscari</i>	4" pots	container full, well rooted
		'419' Bermudagrass	<i>Cynodon dactylon '419'</i>		Hydro-mulch refer to notes

NOTE: Plant list is an aid to bidders only. Contractor shall verify all quantities on plan. All heights and spreads are minimums. All plant material shall meet or exceed remarks as indicated. All trees to have straight trunks and be matching within varieties.

LANDSCAPE TABULATIONS -

	REQUIRED	PROVIDED
GROSS SITE AREA (S.F.)	40,617.97 S.F.	
LESS BUILDING AREA (S.F.)	4,455 S.F.	
NET SITE AREA (S.F.)	36,162.97 S.F.	
REQUIRED LANDSCAPE (X 10%)	3,616.30 S.F.	19,299.47 S.F.
REQUIRED SHRUBS	73	73
5 GALLON MIN. (DIVIDED BY 50)		
LANDSCAPE AREA IN FRONT YARD (75%)	2,712.23 S.F.	5,420.61 S.F.
SHRUBS IN FRONT YARD (75%)	55	65

SHERWIN WILLIAMS

2101 AVONDALE HASLET RD.
 VISTA CROSSROADS ADDITION BLOCK 2, LOT 4
 FORT WORTH, TEXAS

PROJECT CONTACT LIST

ENGINEER TRIANGLE ENGINEERING LLC 1782 W McDERMOTT DRIVE ALLEN, TEXAS 75013 CONTACT: JACK ZANGER TEL: 469-331-8566	OWNER/DEVELOPER FORT WORTH DEVELOPMENT GROUP, LLC 120 MARKET SQ., FLOOR 2, PINEHURST, NC 28374 CONTACT: GAVIN MELIA TEL: 910 724 6720
SURVEYOR TRAVERSE LAND SURVEYING LLC 14200 MIDWAY ROAD, SUITE 130 DALLAS, TX 75224 CONTACT: GRAYSON CEBALLOS TEL: 469-426-7339	

SHERWIN WILLIAMS

2101 AVONDALE HASLET RD.
 FORT WORTH, TEXAS

ISSUE:
 FOR APPROVAL 10.26.2023
 OWNER COMMENTS 11.28.2023

DATE:
 11.28.2023

SHEET NAME:
 LANDSCAPE PLAN

SHEET NUMBER:

L.1

SECTION 02800 - LANDSCAPE

PART 1 - GENERAL

1.1 REFERENCED DOCUMENTS
Refer to bidding requirements, special provisions, and schedules for additional requirements.

1.2 DESCRIPTION OF WORK
Work included: Furnish all supervision, labor, materials, services, equipment and appliances required to complete the work covered in conjunction with the landscaping covered in these specifications and landscaping plans, including:

1. Planting (trees, shrubs, and grass)
2. Bed preparation and fertilization
3. Notification of sources
4. Water and Maintenance until final acceptance
5. Guarantee

1.3 REFERENCE STANDARDS

- A. American Standard for Nursery Stock published by American Association of Nurserymen 27 October 1960, Edition, by American National Standards Institute, Inc. (Z60.1) - plant material.
- B. American Joint Committee on Horticultural Nomenclature, 1942 Edition of Standardized Plant Names
- C. Texas Association of Nurserymen, Grades and Standards
- D. Hortis Third, 1976 - Cornell University

1.4 NOTIFICATION OF SOURCES AND SUBMITTALS

- A. The Contractor shall, within ten (10) days following acceptance of bid, notify the Architect/Owner of the sources of plant materials and bed preparation required for the project.
- B. Samples: Provide representative quantities of sandy loam soil, mulch, bed mix material, gravel, and crushed stone. Samples shall be approved by Architect before use on project.
- C. Product Data: Submit complete product data and specifications on all other specified materials.
- D. Submit three representative samples of each variety of ornamental trees, shrubs, and groundcover plants for Architect's approval. When approved, tag, install, and maintain as representative samples for final installed plant materials.
- E. File Certificates of inspection of plant material by state, county, and federal authorities with Architect, if required.
- F. Soil Analysis: Provide sandy loam soil analysis if requested by the Architect.

PART 3 - EXECUTION

3.1 BED PREPARATION & FERTILIZATION

- A. Landscape Contractor to inspect all existing conditions and report any deficiencies to the Owner.
- B. All planting areas shall be conditioned as follows:
 1. Prepare new planting beds by scraping away existing grass and weeds as necessary. Till existing soil to a depth of six (6") inches prior to placing compost and fertilizer. Apply fertilizer as per manufacturers recommendations. Add six (6") inches of compost and till into a depth of six (6") inches of the topsoil. Apply organic fertilizer such as Sustane or Green Sense at the rate of twenty (20) pounds per one thousand (1,000) square feet.
 2. All planting areas shall receive a two (2") inch layer of specified mulch.
 3. Backfill for tree pits shall be as follows: Use existing top soil on site (use imported topsoil as needed) free from large clumps, rocks, debris, caliche, subsoils, etc., placed in nine (9") inch layers and watered in thoroughly.
- C. Grass Areas:
 1. Areas to be Solid Sod Bermudagrass: Blocks of sod should be laid joint to joint (staggered joints) after fertilizing the ground first. Roll grass areas to achieve a smooth, even surface. The joints between the blocks of sod should be filled with topsoil where they are evidently gapped open, then watered thoroughly.
 2. Areas to be Hydromulch Common Bermudagrass: Hydromulch with bermudagrass seed at a rate of two (2) pounds per one thousand (1,000) square feet. Use a 4' x 8' batter board against the bed areas.

3.2 INSTALLATION

- A. Maintenance of plant materials shall begin immediately after each plant is delivered to the site and shall continue until all construction has been satisfactorily accomplished.
- B. Plant materials shall be delivered to the site only after the beds are prepared and area ready for planting. All shipments of nursery materials shall be thoroughly protected from the drying winds during transit. All plants which cannot be planted at once, after delivery to the site, shall be well protected against the possibility of drying by wind and sun. Balls of earth of B & B plants shall be kept covered with soil or other acceptable material. All plants remain the property of the Contractor until final acceptance.
- C. Position the trees and shrubs in their intended location as per plan.
- D. Notify the Landscape Architect for inspection and approval of all positioning of plant materials.
- E. Excavate pits with vertical sides and horizontal bottom. Tree pits shall be large enough to permit handling and planting without injury to balls of earth or roots and shall be of such depth that, when planted and settled, the crown of the plant shall bear the same relationship to the finish grade as it did to soil surface in original place of growth.

- A. Cleanup: During the work, the premises shall be kept neat and orderly at all times. Storage areas for all materials shall be so organized that they, too, are neat and orderly. All trash and debris shall be removed from the site as work progresses. Keep paved areas clean by sweeping or hosing at end of each days work.

END OF SECTION

JOB CONDITIONS

- A. General Contractor to complete the following punch list: Prior to Landscape Contractor initiating any portion of landscape installation, General Contractor shall leave planting bed areas three (3") inches below finish grade of sidewalks, drives and curbs as shown on the drawings. All lawn areas to receive solid sod shall be left one (1") inch below the finish grade of sidewalks, drives, and curbs. All construction debris shall be removed prior to Landscape Contractor beginning any work.
- B. General Contractor shall provide topsoil as described in Section 02200 - Earthwork.
- C. Storage of materials and equipment at the job site will be at the risk of the Landscape Contractor. The Owner cannot be held responsible for theft or damage.

1.6 MAINTENANCE AND GUARANTEE

- A. Maintenance:
 1. The Landscape Contractor will be held responsible for the maintenance of all work from the time of planting until final acceptance by the Owner. No trees, shrubs, groundcover or grass will be accepted unless they show a healthy growth and satisfactory foliage conditions.
 2. Maintenance shall include watering of trees and plants, cultivation, weeding, spraying, edging, pruning of trees, moving of grass, cleaning up and all other work necessary for maintenance.
 3. A written notice requesting final inspection and acceptance should be submitted to the Owner at least seven (7) days prior to completion. An on-site inspection by Owner and Landscape Contractor will be completed prior to written acceptance.
 4. After final acceptance of installation, the Landscape Contractor will not be required to do any of the above listed work.
- B. Guarantee:
 1. Trees shall be guaranteed for a twelve (12) month period after acceptance. Shrubs and groundcover shall be guaranteed for twelve (12) months. The Contractor shall replace all dead materials as soon as weather permits and upon notification of the Owner. Plants, including trees, which have partially died so that shape, size, or symmetry has been damaged, shall be considered subject to replacement. In such cases, the opinion of the Owner shall be final.
 - a. Plants used for replacement shall be of the same size and kind as those originally planted and shall be planted as originally specified. All work, including materials, labor and equipment used in replacements, shall carry a twelve (12) month guarantee. Any damage, including ruts in lawn or bed areas, incurred as a result of making replacements shall be immediately repaired.
 - b. At the direction of the Owner, plants may be replaced at the start of the next year's planting season. In such cases, dead plants shall be removed from the premises immediately.
 - c. When plant replacements are made, plants, soil mix, fertilizer and mulch are to be utilized as originally specified and inspected for full compliance with Contractor requirements. All replacements are to be included under "Work" of this section.

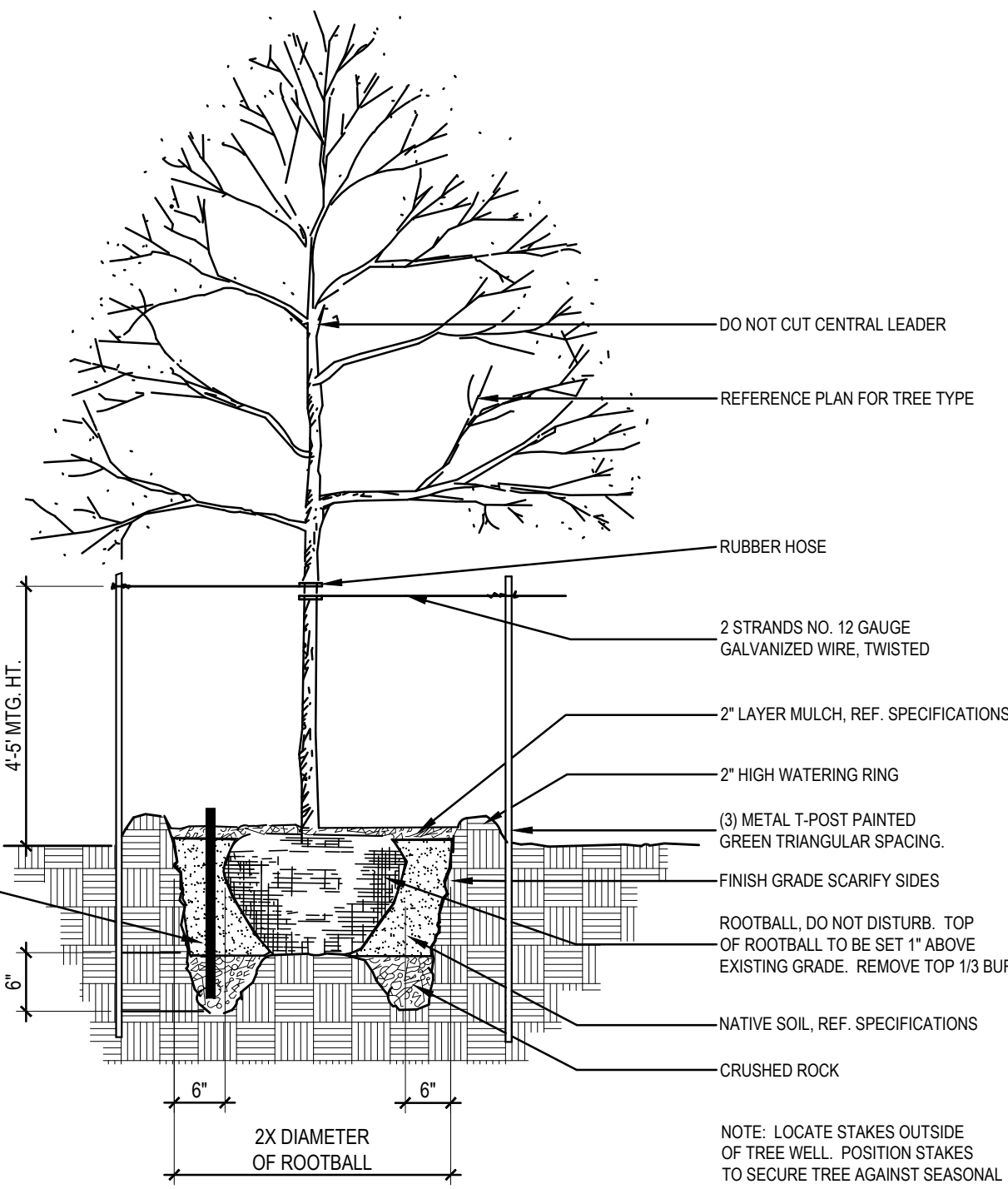
1.7 QUALITY ASSURANCE

- A. General: Comply with applicable Federal, State, County and Local regulations governing landscape materials and work.
- B. Personnel: Employ only experienced personnel who are familiar with the required work. Provide full time supervision by a qualified foreman acceptable to Landscape Architect.
- C. Selection of Plant Material:

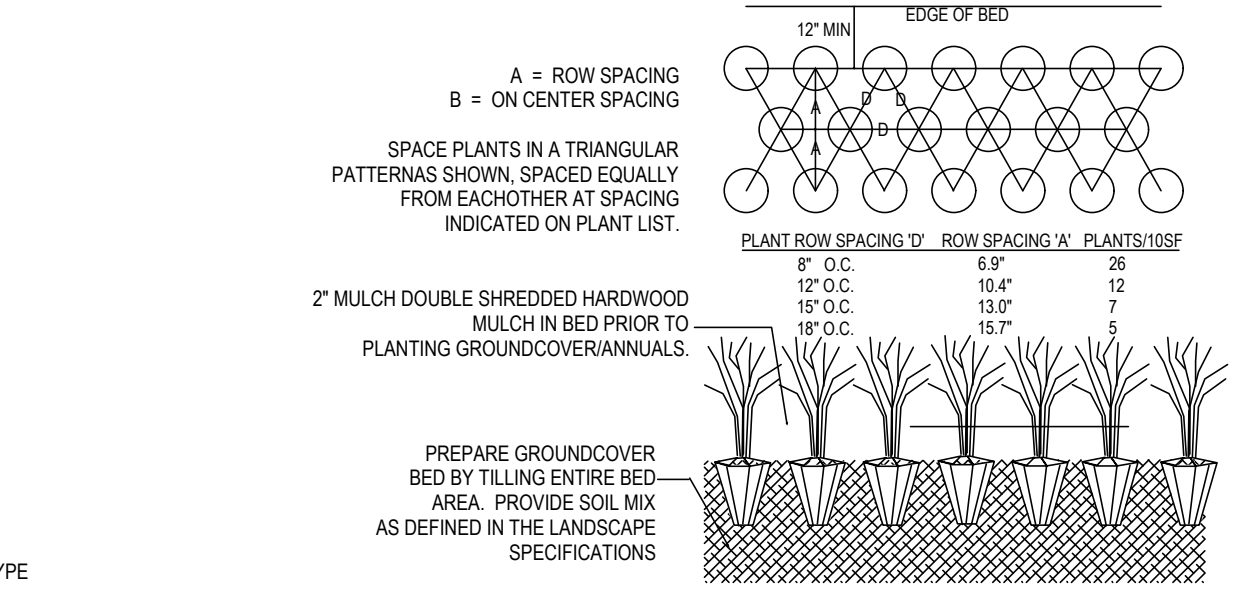
1. Make contact with suppliers immediately upon obtaining notice of contract acceptance to select and book materials. Develop a program of maintenance (pruning and fertilization) which will insure the purchased materials will meet and/or exceed project specifications.
2. Landscape Architect will provide a key identifying each tree location on site. Written verification will be required to document material selection, source and delivery schedules to site.
3. Owner and/or Architect shall inspect all plant materials when reasonable at place of growth for compliance with requirements for genus, species, cultivar/variety, size and quality.
4. Owner and/or Architect retains the right to further inspect all plant material upon arrival at the site and during installation for size and condition of root balls, limbs, branching habit, insects, injuries, and stem defects.
5. Owner and/or Architect may reject unsatisfactory or defective material at any time during the process of work. Remove rejected materials from the site immediately. Plants damaged in transit or at job site shall be rejected.

1.8 PRODUCT DELIVERY, STORAGE AND HANDLING

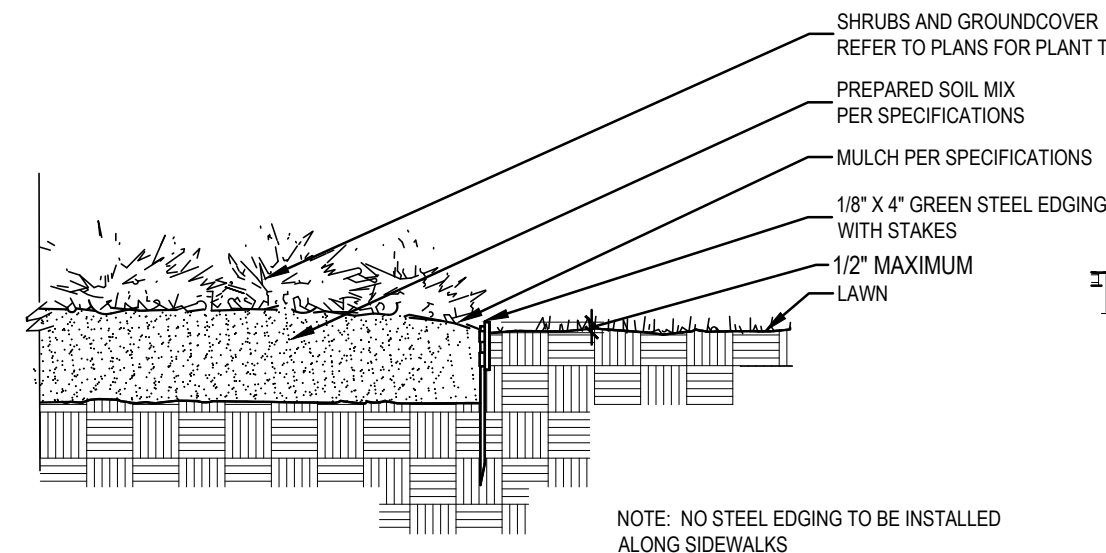
- A. Preparation:
 1. Balled and Burlapped (B&B) Plants: Dig and prepare shipment in a manner that will not damage roots, branches, shape, and future development.
 2. Container Grown Plants: Deliver plants in rigid container to hold ball shape and protect root mass.



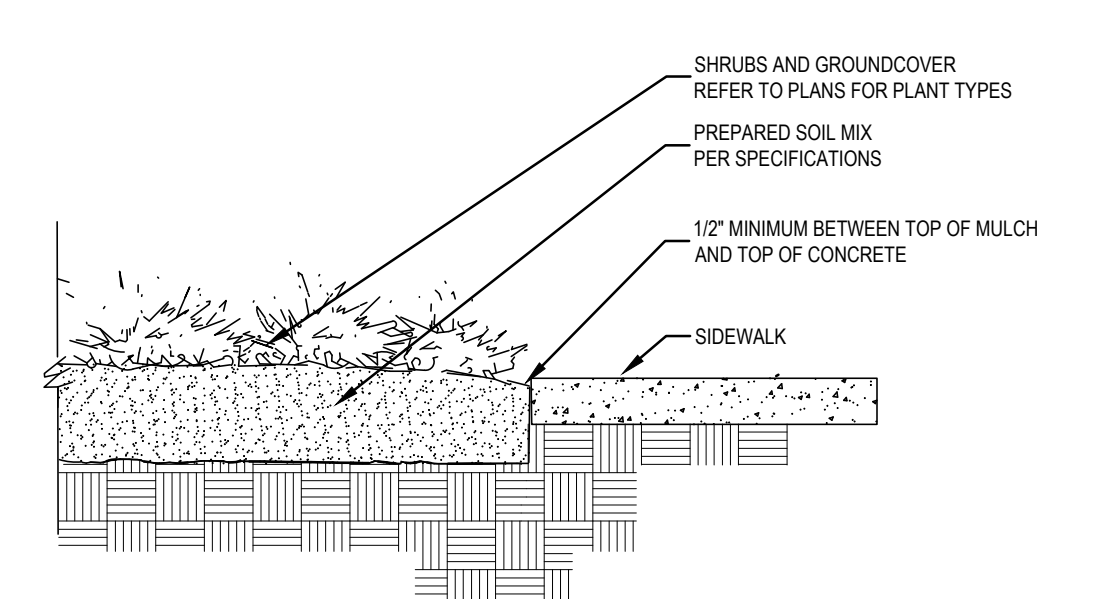
01 TREE PLANTING DETAIL NOT TO SCALE



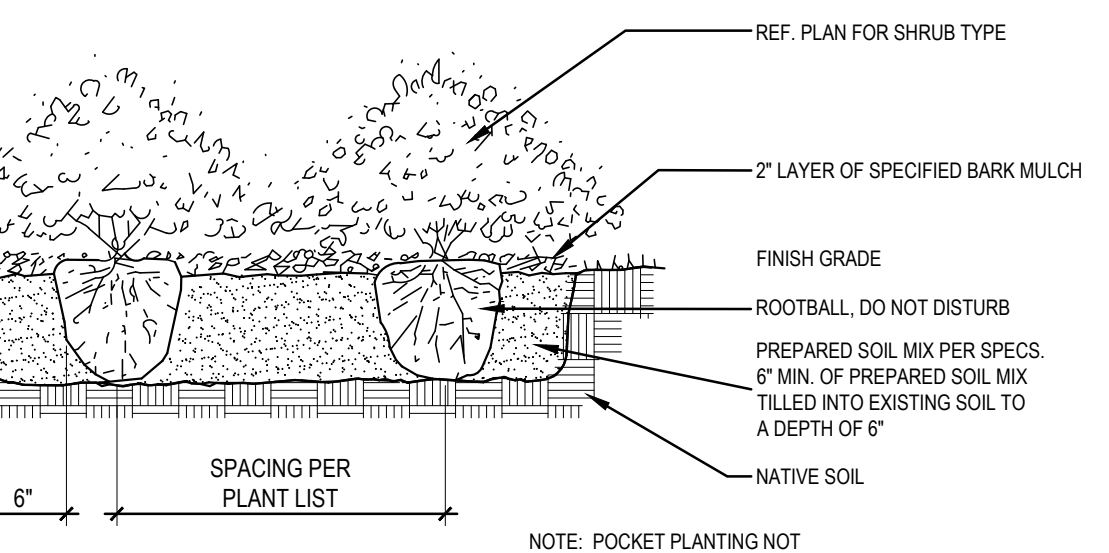
02 GROUNDCOVER PLANTING DETAIL NOT TO SCALE



04 STEEL EDGING DETAIL NOT TO SCALE



03 SIDEWALK / MULCH DETAIL NOT TO SCALE



05 SHRUB PLANTING DETAIL NOT TO SCALE

2.2 SOIL PREPARATION MATERIALS

- A. Sandy Loam:
 1. Friable, fertile, dark, loamy soil, free of clay lumps, subsoil, stones and other extraneous material and reasonably free of weeds and foreign grasses. Loam containing Dallisgrass or Nutgrass shall be rejected.
 2. Physical properties as follows: Clay - between 7-27 percent; Silt - between 15-25 percent; Sand - less than 52 percent.
 3. Organic matter shall be 2%-10% of total dry weight.
 4. If requested, provide a certified soil analysis conducted by an approved soil testing laboratory verifying that sandy loam meets the above requirements.
- B. Organic Material: Compost with a mixture of 80% vegetative matter and 20% animal waste. Ingredients should be a mix of course and the textured material.
- C. Premixed Bedding Soil as supplied by Vital Earth Resources, Gladewater, Texas. Professional Bedding Soil as supplied by Living Earth Technology, Dallas, Texas or Acid Gro Municipal Mix as supplied by Soil Building Systems, Dallas, Texas or approved equal.
- D. Sharp Sand: Sharp sand must be free of seeds, soil particles and weeds.
- E. Mulch: Double Shredded Hardwood Mulch, partially decomposed, dark brown. Living Earth Technologies or approved equal.
- F. Organic Fertilizer: Fertilid, Sustane, or Green Sense or equal as recommended for required applications. Fertilizer shall be delivered to the site in original unopened containers, each bearing the manufacturer's guaranteed statement of analysis.
- A. Commercial Fertilizer: 10-20-10 or similar analysis. Nitrogen source to be a minimum 50% slow release organic Nitrogen (SCU or UF) with a minimum 8% sulphur and 4% iron, plus micronutrients.
- B. Peat: Commercial sphagnum peat moss or partially decomposed shredded pine bark or other approved organic material.

2.3 MISCELLANEOUS MATERIALS

- A. Steel Edging: Shall be Ryerson "Estate Curbing", 1/8" x 4" with stakes 4' on center.
- B. Staking Material for Shade Trees:
 1. Post: Studied T-Post, #1 Armo with anchor plate; 6'-0" length; paint green.
 2. Wire: 12 gauge, single strand, galvanized wire.
 3. Rubber hose: 2 ply, fiber reinforced hose, minimum 1/2 inch inside diameter. Color: Black.
- C. Gravel: Washed native pea gravel, graded 1 in. to 1-1/2 in.
- D. Filter Fabric: Mirafi 140N by Celanese Fibers Marketing Company, available at Loftland Co., (214) 631-5250 or approved equal.

LANDSCAPE ARCHITECT
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10.26.2023

SHERWIN WILLIAMS
2101 AVONDALE HASLET RD.
FORT WORTH, TEXAS

SHERWIN WILLIAMS
2101 AVONDALE HASLET RD.
VISTA CROSSROADS ADDITION BLOCK 2, LOT 4
FORT WORTH, TEXAS

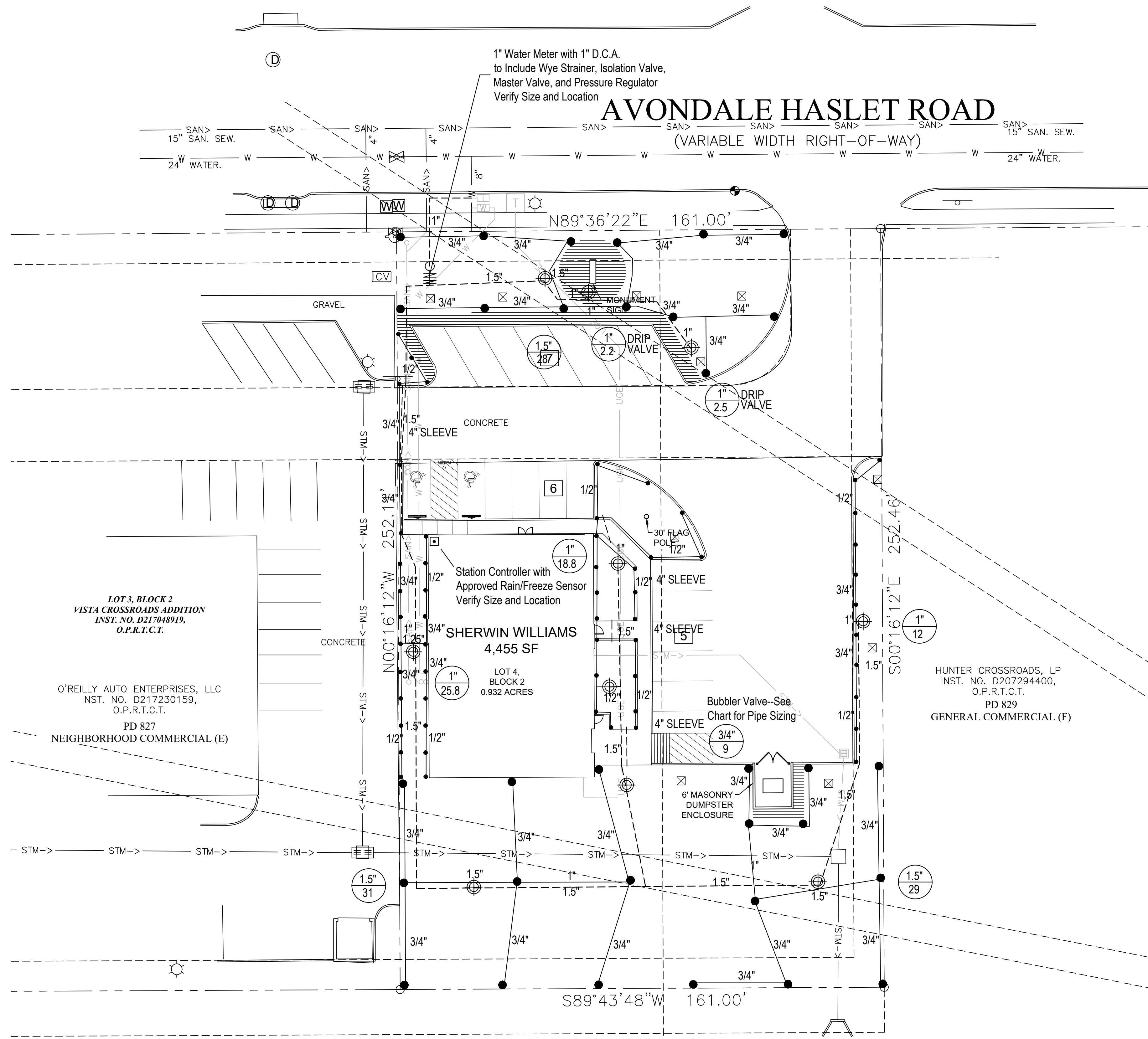
PROJECT CONTACT LIST	
ENGINEER TRIANGLE ENGINEERING LLC 1782 W McDERMOTT DRIVE ALLEN, TEXAS 75013 CONTACT: JACK ZANGER TEL: 469-331-8566	OWNER/DEVELOPER FORT WORTH DEVELOPMENT GROUP, LLC 120 MARKET SQ., FLOOR 2, PINEHURST, NC 28374 CONTACT: GAVIN MELIA TEL: 910 724 6720
SURVEYOR TRAVERSE LAND SURVEYING LLC 14200 MIDWAY ROAD, SUITE 130 DALLAS, TX 75224 CONTACT: GRAYSON CEBALLOS TEL: 469-426-7339	

ISSUE:
FOR APPROVAL 10.26.2023

DATE:
10.26.2023

SHEET NAME:
LANDSCAPE SPECIFICATIONS

SHEET NUMBER:
L.2



TCEQ NOTES

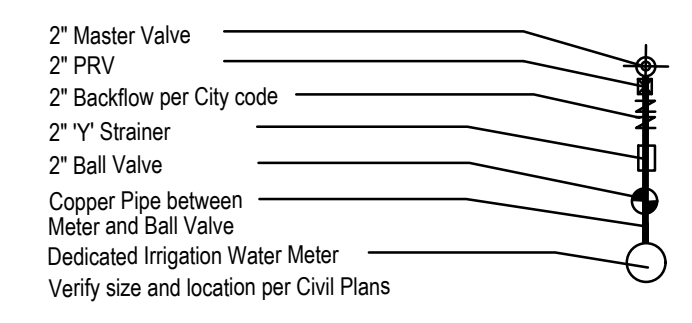
- All irrigation equipment to be located no closer than 4" to any pavement and / or structure
- Electrical splices at each valve and controller only.
- Irrigation in Texas is regulated by the Texas Commission on Environmental Quality (TCEQ) MC-178 / P.O. BOX 13087 Austin, Texas 78711-3087 www.tceq.state.tx.us

BUBBLER PIPING CHART

- 1-5 BUBBLERS - 1/2" PIPE
- 6-10 BUBBLERS - 3/4" PIPE
- 11-20 BUBBLERS - 1" PIPE
- 21-30 BUBBLERS - 1 1/4" PIPE
- 31-40 BUBBLERS - 1 1/2" PIPE

IRRIGATION LEGEND

- Hunter PRS30-04 4" Pop-up Spray Head with Plastic Hunter Pro Adjustable Nozzle
- Hunter PRS30-12 12" Pop-up Spray Head with Plastic Hunter Pro Adjustable Nozzle
- Hunter PGP Ultra-04 Rotors
- Hunter Multi-Stream Bubblers on Hunter PRS30-06 Pop-up Spray Head
- Spray, Rotor & Bubblers Zones-Hunter PGV Control Valves (See Plan for Size)
- Drip Zones-Hunter ICZ Drip Zone Control Kits (See Plan for Size)
- Hunter I-Core series Controller with Hunter Solar Sync Sensor
- WATER METER, SIZE AS INDICATED
- D.C.A. - SIZE AS INDICATED
- to include Wye Strainer, Isolation Valve, Master Valve, and Pressure Regulator
- PVC CLASS 200 LATERAL LINE
- PVC CLASS 200 MAINLINE
- PVC SCHEDULE 40 SLEEVING
- VALVE SIZE GPM
- HUNTER HDL-09-12-100-PC Drip Line and Fittings (12" LATERAL SPACING, 12" EMITTER SPACING)
- PVC LATERAL PIPING SIZED AS REQUIRED
- INSTALL ALL EQUIPMENT ACCORDING TO MANUFACTURERS SPECIFICATIONS



SLEEVING NOTES

- Contractor shall lay sleeves and conduits at twenty-four (24) inches below finish grade of the top of pavement.
- Contractor shall extend sleeves one (1) foot beyond edge of all pavement.
- Contractor shall cap pipe ends using PVC caps.
- All sleeves shall be Schedule 40 PVC pipe.
- Contractor shall furnish Owner and Irrigation Contractor with an 'as-built' drawing showing all sleeve locations.

Water Pressure Calculations

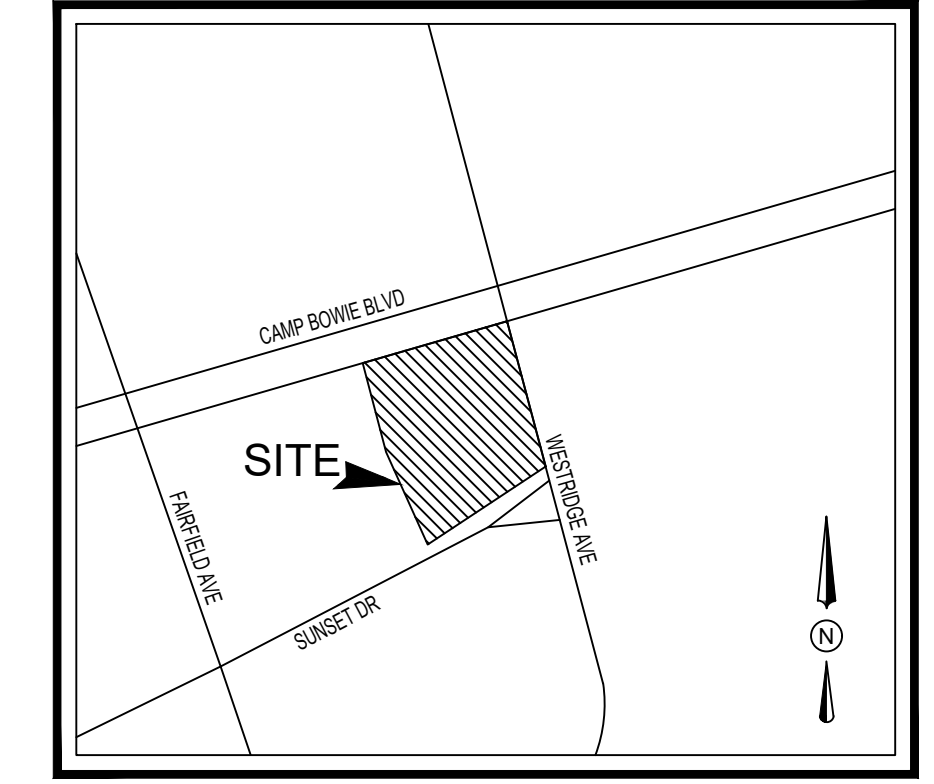
Static Pressure (at the water meter)- 65 psi
Design Pressure for Remote Zone- 54.6 psi
Pressure Losses for Remote Zone and Meter Components- 19.6 psi

Water Meter Components- Pressure Losses

Master Valve Pressure- 2 psi
Pressure Regulator- 1.2 psi
Back Flow- 5 psi
Wye Strainer- .75 psi
Ball Valve- .8 psi

Irrigation Zones Pressure Losses- (most remote zone)

Main Line- 6.4 psi
Valve- 2 psi
Later Line- 1.4 psi
Sprinkler requirements-35 psi



VICINITY MAP
N.T.S.

IRRIGATION NOTES

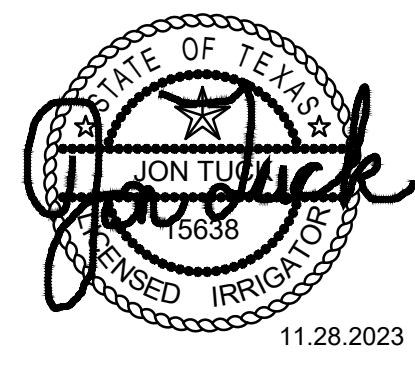
- All sprinkler equipment numbers reference the HUNTER equipment catalog unless otherwise indicated.
- LAWN SPRAY HEADS are SRS-04 installed as per detail shown.
- SHRUB SPRAY HEADS are SRS-12 installed as per detail shown.
- ELECTRIC CONTROL VALVES shall be HUNTER PGV-S SERIES installed per detail shown. Size valves as shown on plan. Valves shall be installed in valve boxes large enough to permit manual operation, removal of solenoid and/or valve cover without any earth excavation.
- AUTOMATIC CONTROLLER shall be installed at location shown. Power (120V) shall be located in a junction box within five (5) feet of controller location by other trades.
- All 24 volt valve wiring is to be UF 14 single conductor. All wire splices are to be permanent and waterproof.
- SLEEVES shall be installed by General Contractor. Sleeve material shall be Schedule 40. Size as indicated on plan.
- Ten days prior to start of construction, Landscape or Irrigation Contractor shall verify static water pressure. If static pressure is less than 65 P.S.I., do not work until notified to do so by Owner. The irrigation contractor shall also verify that the site plan matches what has been constructed on site. Any landscape area that is less than 48 inches wide must be drip irrigation. If discrepancies between the irrigation plan and what is on site is discovered the irrigation contractor shall notify the GC, Civil Engineer and Landscape Architect.
- All main line and lateral piping to a minimum of 12 inches of cover. All piping under paving shall have a minimum of 18" of cover.
- The Irrigation Contractor shall coordinate installation of the system with the Landscape Contractor so that all plant material will be watered in accordance with the intent of the plans and specifications.
- The Irrigation Contractor shall select the proper arc and radius for each nozzle to insure 100% and proper coverage of all lawn areas and plant material. All nozzles in parking lot islands and planting beds shall be low angle to minimize over spray on pavement surfaces. No water will be allowed to spray on building.

DRIP IRRIGATION NOTES

- Drip Irrigation Equipment numbers reference Rainbird Equipment Catalog unless otherwise noted.
- Landscape Contractor shall be required to supply Owner's Construction Manager with all equipment specifications and maintenance guidelines.
- Landscape Contractor shall be required to follow Manufacturer's Specifications and installation guidelines for drip system.
- PRESSURE COMPENSATING EMITTERS shall be: Multiset Rain Bug EM6-M101, Multi outlet Shrub Bug EM76-M101 or approved equal. (1 PER EVERY 6 - 4" POTS)
- SINGLE OUTLET PRESSURE COMPENSATING EMITTERS shall be: Rain Bug Emitters EM-M05, -M10, -M20 and Shrub Bug Emitters EMT-M10, -M20 or approved equal. (1 PER EACH 1 OR 5 GAL PLANT)
- DRIP PRESSURE REGULATORS shall be: PSI-HLA-15, PSI-HLA-20, PSI-HMB-20, PSI-HMB-25 or approved equal.
- Y-FILTERS shall be: RBY-075-200, RBY-100-200 or approved equal.
- MAIN IRRIGATION TUBING shall be: RBT-150P, RBT-160V or approved equal.
- EMITTER DISTRIBUTION TUBING shall be: RBT-150P, RBT-160V or approved equal.
- SUBTERRANEAN EMITTER BOX shall be: SEB-6 or approved equal.
- Drip system piping only occurs within shrub / groundcover beds and rock mulch areas. Piping shall be a maximum 4" depth and a minimum 2" depth.
- Contractor shall verify that all drip system valves and spray system valves are sectioned separately on controller.

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SHERWIN WILLIAMS
 2101 AVONDALE HASLET RD.
 FORT WORTH, TEXAS

ISSUE:
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OWNERS COMMENTS 11.28.2023

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IRRIGATION PLAN

SHEET NUMBER:

L.3

