



**PERMIT APPLICATION REVIEW FORM FOR  
CABLE, CONDUIT, AND POLE LINE ACTIVITY  
IN FORT BEND COUNTY**

**Fort Bend County  
Engineering Department**  
301 Jackson Suite 401  
Richmond, Texas 77469  
281.633.7500  
[Permits@fortbendcountytx.gov](mailto:Permits@fortbendcountytx.gov)

☐

**Right of Way Permit**

☒

**Commercial Driveway Permit**

Permit No: 2017-16310

The following "Notice of Proposed Cable, Conduit, and/or Pole Line activity in Fort Bend County" and accompanying attachments have been reviewed and the notice conforms to appropriate regulations set by Commissioner's Court of Fort Bend County, Texas.

**(1) COMPLETE APPLICATION FORM:**

X
X
X

a. Name of road, street, and/or drainage ditch affected.

b. Vicinity map showing course of directions

c. Plans and specifications

**(2) BOND:**

☐

County Attorney, approval when applicable.

☐

Perpetual bond currently posted.

Bond No: \_\_\_\_\_

Amount: \_\_\_\_\_

☒

Performance bond submitted.

Bond No: [REDACTED]

Amount: \$10,000.00

☐

Cashier's Check

Check No: \_\_\_\_\_

Amount: \_\_\_\_\_

**(3) DRAINAGE DISTRICT APPROVAL (WHEN APPLICABLE):**

\_\_\_\_\_  
Drainage District Approval

\_\_\_\_\_  
Date

**We have reviewed this project and agree it meets minimum requirements.**

*Charles O. Ay*

\_\_\_\_\_  
Permit Administrator

10/30/2017

\_\_\_\_\_  
Date







**PERFORMANCE BOND COVERING ALL CABLE, CONDUIT AND/OR POLE  
LINE ACTIVITY IN, UNDER, ACROSS OR ALONG FORT BEND COUNTY  
ROAD, COMMERCIAL DRIVEWAY AND MEDIAN OPENINGS OR  
MODIFICATIONS (AUTHORIZED)**

BOND NO [REDACTED]

THE STATE OF TEXAS           §

KNOW ALL MEN BY THESE PRESENTS:

COUNTY OF FORT BEND       §

THAT WE, BREWER CUSTOM BUILDERS, LLC, whose (713) 292-8177  
7102 SPRING RUN LANE, KATY, TX 77494, hereinafter called the Principal, and Merchants Bonding Company (Mutual), a  
Corporation existing under and by virtue of the laws of the state of Iowa and authorized to do an indemnifying  
business in the state of Texas, and whose principal office is located at 6700 Westown Parkway, West Des Moines, IA 50266,  
whose officer residing in the State of Texas, authorized to accept service in all suits and actions brought within said state is  
Keenan Lehmann and whose address is 9500 Arboretum Boulevard, Suite 100, Austin, TX 78759  
hereinafter called the Surety, and held and firmly bound unto, Robert E. Hebert, County Judge of Fort Bend County, Texas,  
or his successors in office, in the full sum of Ten Thousand Dollars (\$10,000.00)  
current, lawful money of the United States of America, to be paid to said Robert E. Hebert, County Judge of Fort Bend County,  
Texas, or his successors in office, to which payment well and truly to be made and done, we, the undersigned, bind ourselves  
and each of us, our heirs, executors, administrators, successors, assigns, and legal representatives, jointly and severally, by  
these presents.

THE CONDITION OF THIS BOND IS SUCH THAT, WHEREAS, the above bounden principal contemplates laying,  
constructing, maintaining and/or repairing one or more cables, conduits, and/or pole lines in, under, across and/or along  
roads, streets and highways, commercial driveway and median openings or modifications in the County of Fort Bend, and  
the State of Texas, under the jurisdiction of the Commissioners' Court of Fort Bend County, Texas, pursuant to the  
Commissioners' Court order adopted on the 1st of December, A.D. 1980, recorded in Volume 13, of the Commissioners'  
Court Minutes of Fort Bend County, Texas, regulating same, which Commissioners' Court order is hereby referred to and  
made a part hereof for all purposes as though fully set out herein;

AND WHEREAS, the principal desires to provide Fort Bend County with a performance bond covering all such cable,  
conduit and/or pole line activity, commercial driveway and median openings or modifications;

NOW, THEREFORE, if the above bounden principal shall faithfully perform all its cable, conduit and/or pole line  
activity (including, but not limited to the laying, construction, maintenance and/or repair of cables, conduits and/or pole lines)  
in, under, across and/or along roads, streets and highways, commercial driveway and median openings or modifications in  
the County of Fort Bend and State of Texas, under the jurisdiction of the Commissioners Court of Fort Bend County, Texas,  
pursuant to and in accordance with minimum requirements and conditions of the above mentioned Commissioners' Court  
order set forth and specified to be by said principal done and performed, at the time and in the manner therein specified, and  
shall pay over and make good and reimburse Fort Bend County, all loss and damages which Fort Bend County may sustain  
by reason of any failure or default on the part of said principal, then this obligation shall be null and void, otherwise to remain  
in full force and effect.

This bond is payable at the County Courthouse in the County of Fort Bend and State of Texas.

It is understood that at any time Fort Bend County deems itself insecure under this bond, it may require further and/or  
additional bonds of the principal.

EXECUTED this 12th day of October, 2017.

BREWER CUSTOM BUILDERS, LLC

PRINCIPAL



BY JAMES COUNCE

Merchants Bonding Company (Mutual)

SURETY



BY Molly Reagan Salazar Attorney-in-Fact



**MERCHANTS**  
**BONDING COMPANY**  
**POWER OF ATTORNEY**

Know All Persons By These Presents, that MERCHANTS BONDING COMPANY (MUTUAL) and MERCHANTS NATIONAL BONDING, INC., both being corporations of the State of Iowa (herein collectively called the "Companies") do hereby make, constitute and appoint, individually,

**Molly Reagan Salazar**

their true and lawful Attorney(s)-in-Fact, to sign its name as surety(ies) and to execute, seal and acknowledge any and all bonds, undertakings, contracts and other written instruments in the nature thereof, on behalf of the Companies in their business of guaranteeing the fidelity of persons, guaranteeing the performance of contracts and executing or guaranteeing bonds and undertakings required or permitted in any actions or proceedings allowed by law.

This Power-of-Attorney is granted and is signed and sealed by facsimile under and by authority of the following By-Laws adopted by the Board of Directors of Merchants Bonding Company (Mutual) on April 23, 2011 and amended August 14, 2015 and adopted by the Board of Directors of Merchants National Bonding, Inc., on October 18, 2015.

"The President, Secretary, Treasurer, or any Assistant Treasurer or any Assistant Secretary or any Vice President shall have power and authority to appoint Attorneys-in-Fact, and to authorize them to execute on behalf of the Company, and attach the seal of the Company thereto, bonds and undertakings, recognizances, contracts of indemnity and other writings obligatory in the nature thereof."

"The signature of any authorized officer and the seal of the Company may be affixed by facsimile or electronic transmission to any Power of Attorney or Certification thereof authorizing the execution and delivery of any bond, undertaking, recognizance, or other suretyship obligations of the Company, and such signature and seal when so used shall have the same force and effect as though manually fixed."

In connection with obligations in favor of the Florida Department of Transportation only, it is agreed that the power and authority hereby given to the Attorney-in-Fact includes any and all consents for the release of retained percentages and/or final estimates on engineering and construction contracts required by the State of Florida Department of Transportation. It is fully understood that consenting to the State of Florida Department of Transportation making payment of the final estimate to the Contractor and/or its assignee, shall not relieve this surety company of any of its obligations under its bond.

In connection with obligations in favor of the Kentucky Department of Highways only, it is agreed that the power and authority hereby given to the Attorney-in-Fact cannot be modified or revoked unless prior written personal notice of such intent has been given to the Commissioner-Department of Highways of the Commonwealth of Kentucky at least thirty (30) days prior to the modification or revocation.

In Witness Whereof, the Companies have caused this instrument to be signed and sealed this 12th day of October, 2017.



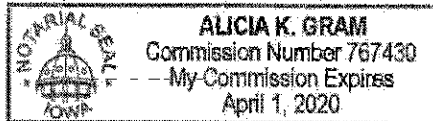
MERCHANTS BONDING COMPANY (MUTUAL)  
MERCHANTS NATIONAL BONDING, INC.

By

*Larry Taylor*  
President

STATE OF IOWA  
COUNTY OF DALLAS ss.

On this 12th day of October, 2017, before me appeared Larry Taylor, to me personally known, who being by me duly sworn did say that he is President of MERCHANTS BONDING COMPANY (MUTUAL) and MERCHANTS NATIONAL BONDING, INC.; and that the seals affixed to the foregoing instrument are the Corporate Seals of the Companies; and that the said instrument was signed and sealed in behalf of the Companies by authority of their respective Boards of Directors.



*Alicia K. Gram*

Notary Public

(Expiration of notary's commission  
does not invalidate this instrument)

I, William Warner, Jr., Secretary of MERCHANTS BONDING COMPANY (MUTUAL) and MERCHANTS NATIONAL BONDING, INC., do hereby certify that the above and foregoing is a true and correct copy of the POWER-OF-ATTORNEY executed by said Companies, which is still in full force and effect and has not been amended or revoked.

In Witness Whereof, I have hereunto set my hand and affixed the seal of the Companies on this 12th day of October, 2017.



*William Warner Jr.*  
Secretary



PROPOSED  
CIVIL PLANS  
FOR  
SE CONTRACTORS  
7575 FAIRCHILD RD  
FORT BEND COUNTY

FORT BEND COUNTY ENGINEER

ENGINEER: Richard W. Stolleis, P.E.  
for Richard W. Stolleis, P.E.

DATE: 4/25/17

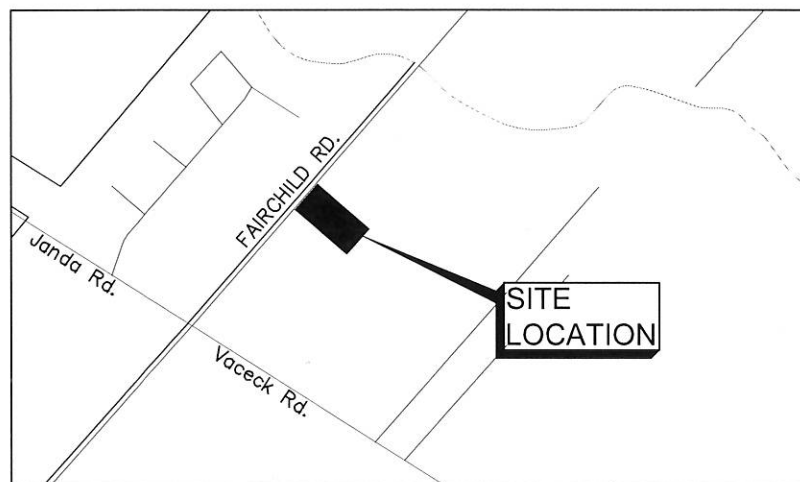
THESE SIGNATURES ARE VOID IF CONSTRUCTION  
HAS NOT COMMENCED IN (1) YEAR FROM DATE  
OF APPROVAL.

APPROVED: Cassandra H. Sc...  
for Development Coordinator

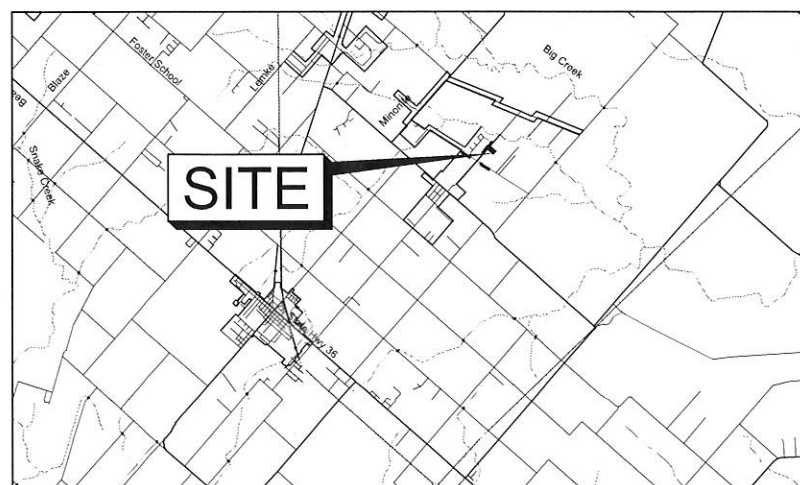
DATE: 4/25/17

DRAWING INDEX

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LOCATION MAP



VICINITY MAP

KEY MAP NO. 685G  
ZIP CODE 77469

**W|G|A**  
WARD, GETZ &  
ASSOCIATES, J.J.P  
CONSULTING ENGINEERS  
TEXAS REGISTERED ENGINEERING FIRM F-9756  
2500 Tanglewilde, Suite 120  
Houston, Texas 77063  
713.789.1900

APRIL 2017

WGA PROJECT No. 40009-021



4/11/17



STATE OF TEXAS  
COUNTY OF FORT BEND

WE, SE Construction, Inc., hereinafter referred to as the Owners of the 8.4901 acre tract described in the above and foregoing map of FAIRCHILD BUILDING, do hereby make and establish said subdivision and development plan of said property according to all lines, dedications, restrictions and notations on said maps or plat and hereby dedicate to the use of the public forever, all streets (except those streets designated as private streets, or permanent access easements), alleys, parks, water courses, drains, easements and public places shown thereon for the purposes and considerations expressed, and do hereby bind ourselves, our heirs, successors and assigns to warrant and forever defend the title to the land so so dedicated.

FURTHER, Owners do hereby dedicate for public utility purposes an unobstructed aerial easement five (5) feet in width from a place twenty (20) feet above the ground level upward, located adjacent to all public utility easements shown on the attached plat.

FURTHER, Owners do hereby covenant and agree that all of the property within the boundaries of this plat is hereby restricted to prevent the drainage of any septic tanks into any public or private street, permanent access easement, road or alley or any drainage ditch, either directly or indirectly.

FURTHER, Owners do hereby covenant and agree that all of the property within the boundaries of this plat and adjacent to any drainage easement, ditch, gully, creek or natural drainage way is hereby restricted to keep such drainage ways easements clear of fences, buildings, planting and other obstructions to the operations and maintenance of the drainage facility and that such abutting property shall not be permitted to drain directly into this easement except by means of an approved drainage structure.

FURTHER, Owner does hereby acknowledge the receipt of the "Order for Regulation of Outdoor Lighting in the Unincorporated Areas of Fort Bend County, Texas," and do hereby covenant and agree and shall comply with this order as adopted by the Fort Bend County Commissioners Court on March 23, 2004, and any subsequent amendments.

WITNESS our hands in Fort Bend County, Texas, this 31st day of March, 2017.

By: Erasmus Salvador, President

By: Elmer Salvador, Vice President

STATE OF TEXAS  
COUNTY OF Harris

BEFORE ME, the undersigned authority, on this day personally appeared Erasmus Salvador and Elmer Salvador, known to me to be the persons whose names are subscribed to the foregoing instrument and acknowledged to me that they executed the same for the purposes and considerations therein expressed.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this the 31st day of March, 2017.

Jacoby Bell  
Notary Public in and for the  
State of Texas  
My Commission Expires: July 03, 2018

I, Ronald Patrick Kell, am authorized under the laws of the State of Texas to practice the profession of surveying and hereby certify that the above subdivision is true and correct; was prepared from an actual survey of the property made under my supervision on the ground; that all boundary corners, angle points, points of curvature and other points of reference have been marked with iron (or other suitable permanent metal) pipes or rods have an outside diameter of not less than five eighths (5/8) inch and a length of not less than three (3) feet, unless otherwise noted, and that the plat boundary corners have been tied to the nearest survey corner and the Texas State Plane Coordinate System (NAD83).



Ronald Patrick Kell  
Registered Professional Land Surveyor  
Texas Registration No. 6424  
Date: 3/3/17

I, Tyler Munson, P.E., registered under the laws of the State of Texas to practice the profession of Engineering, do hereby certify that this plat meets all requirements of Fort Bend County, Texas, to the best of my knowledge.



Tyler Munson, P.E.  
Texas Registration No. 122052  
Ward, Getz, and Associates, LLP  
Firm Number 9756  
2/22/17

This plat of FAIRCHILD BUILDING was approved on the 31st day of March, 2017, by the City of Fairchild City Commission, and signed this the 31st day of March, 2017, provided however, this approval shall be invalid, and null, and void, unless this plat is filed with the County Clerk of Fort Bend County, Texas, within six (6) months hereafter.

Name: Bob Haenel  
Bob Haenel  
Janis Vacek  
Name: Secretary  
Janis Vacek

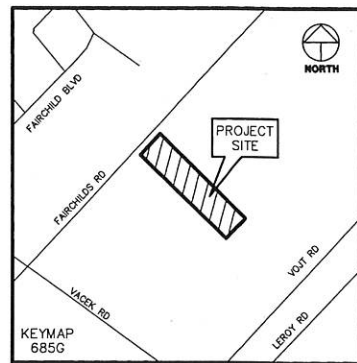
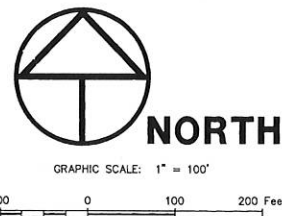
#### DISTRICT NAMES

WCID	N/A
MUD	N/A
LID	N/A
DID	FBC DRAINAGE
SCHOOL	NEEDVILLE ISD
FIRE	FAIRCHILD
IMPACT FEE AREA	NONE
CITY OR CITY ETJ	VILLAGE OF FAIRCHILD ETJ
UTILITIES CO.	CENTERPOINT, AT&T

#### GENERAL NOTES

- The property is located within Fort Bend County, Fort Bend County Drainage District, Needville Independent School District, and the Village of Fairchild Extraterritorial Jurisdiction (ETJ).
- Minimum finished slab elevation shall be 75.20 feet above mean sea level. The top of slab elevation at any point on the perimeter of the slab shall not be less than eighteen (18) inches above natural ground.
- In no case shall any slab be less than 12 inches above the extreme event sheet flow or ponding elevation as determined by the engineering site design.
- Land use within this subdivision is limited to an average imperviousness of no more than twenty-seven percent (27%). The drainage system has been designed under the assumption that this percentage will not be exceeded. If this percentage of average imperviousness is exceeded, a replat and/or redesign of the system may be necessary.
- This property lies within Unshaded Zone "X" according to FEMA FIRM Map No. 48157 C0400L, revised/effective date of April 2, 2014. This determination was done by graphic plotting and is approximate only, and has not been field verified. This flood statement does not imply that the property or structures thereon will be free from flooding or flood damage. On rare occasions floods can and will occur and flood heights may be increased by man-made or natural causes. This flood statement shall not create liability on the part of Windrose Surveying and Land Services, LLC.
- All visible easements and easements of record affecting this property as reflected on the City Planning Letter from Texas Abstract Services, Order No. 20427, effective/issued date of February 3, 2017, are shown hereon. Surveyor has relied upon the above-mentioned City Planning Letter with regard to any easements, setbacks, restrictions, or rights-of-way affecting the subject property. No additional research regarding the existence of easements, setbacks, restrictions, rights-of-way, or other matters of record has been performed by the surveyor.
- Bearings were based on the Texas State Plane Coordinate System, South Central Zone (NAD83).
- All coordinates shown hereon are Texas South Central Zone No. 4204 State Plane Grid Coordinates (NAD 83), and may be brought to surface by applying the following scale factor = 0.99986458.
- Primary Benchmark is National Geodetic Survey (NGS) Monument No. AW5472. Elevation = 72.53' (NAVD 1988, 1986 Adjustment).
- Temporary Benchmark is a set mag nail located at the West corner of the subject property along Fairchild Road. Elevation = 75.88' (NAVD 1988, 1986 Adjustment).
- The drainage system for this subdivision shall be designed in accordance with the Fort Bend County Drainage Criteria Manual which allows street ponding with intense rainfall events.
- All drainage easements shall be kept clear of fences, building, vegetation, and other obstructions for the purpose of the operation and maintenance of the drainage facility. All property is required to drain into the drainage easements through an approved drainage structure.
- All pipelines or pipeline easements are shown hereon.
- This property is located in Lighting Zone No. 2, according to the "Order for Regulation of Outdoor Lighting".
- Sidewalks shall be built or caused to be built by the developer, homebuilder or homeowners' association at a width not less than 5 feet on both sides of all dedicated rights-of-way within said plat and on the contiguous right-of-way of all perimeter roads surrounding said plat, in accordance with the A.D.A.
- Subject to Section 7 (GreenSpace Regulations) of the Fort Bend County Regulations of Subdivisions.
- The property owner or their successors or assigns shall be responsible for the maintenance of all detention facilities and drainage easements, to include but not limited to stormwater pump facilities.

ABBREVIATIONS  
FND - FOUND  
F.C. - FILM CODE  
H.C.C.F. - HARRIS COUNTY CLERKS FILE  
H.C.D.R. - HARRIS COUNTY DEED RECORDS  
H.C.M.R. - HARRIS COUNTY MAP RECORDS  
IP - IRON PIPE  
IR - IRON ROD  
NO. - NUMBER  
PG. - PAGE  
R.O.W. - RIGHT-OF-WAY  
SQ. FT. - SQUARE FEET  
VOL. - VOLUME  
A.E. - AERIAL EASEMENT  
B.L. - BUILDING LINE  
S.S.E. - SANITARY SEWER EASEMENT  
S.T.S.E. - STORM SEWER EASEMENT  
U.E. - UTILITY EASEMENT  
W.L.E. - WATER LINE EASEMENT



CITY OF FAIRCHILD, FORT BEND COUNTY, TEXAS  
**VICINITY MAP**  
NTS

I, Richard Stollie, P.E., Fort Bend County Engineer, do hereby certify that the plat of this subdivision complies with all the existing rules and regulations of this Office as adopted by the Fort Bend County Commissioners' Court. However, no certification is hereby given as to the effect of drainage from this subdivision on the intercepting drainage artery, parent stream, or any other area of subdivision within the watershed.

Richard Stollie  
Richard Stollie, P.E.  
Fort Bend County Engineer

APPROVED by the Commissioners' Court of Fort Bend County, Texas, this the 11th day of April, 2017.

W. A. Andy Mayers, Commissioner, Precinct 3  
Robert E. Hebert, Ph.D., County Judge  
James Patterson, Commissioner, Precinct 4  
Grady Prestage, Commissioner, Precinct 2

I, Laura Richard, County Clerk in and for Fort Bend County, do hereby certify that the foregoing instrument with its certificate of authentication was filed for recordation in my office on April 11, 2017, at 3:11 o'clock P.m., and duly recorded on April 11, 2017, in Plat No. 20170078 of the Map Records of Fort Bend County, for said county.

Witness my hand and seal of office, at Richmond, Texas, the day and date last above written.

Laura Richard  
Laura Richard  
Clerk of the County Court  
of Fort Bend County, Texas  
By: Deputy

12 PGS 2017038338  
PLAT ATTACH

FILED AND RECORDED  
OFFICIAL PUBLIC RECORDS

Laura Richard  
Laura Richard, County Clerk  
Fort Bend County, Texas  
April 11, 2017 03:11:16 PM  
FEE: \$280.00 RNN  
PLAT 20170078

**FAIRCHILD BUILDING**  
A SUBDIVISION OF 8.4901 AC. / 369,828 SQ. FT. OF LAND  
SITUATED IN THE  
BARNABAS WICKSON LEAGUE, ABSTRACT NO. 95  
FORT BEND COUNTY, TEXAS

1 BLOCK 1 RESERVE 0 LOTS  
MARCH 2017

Owner  
SE Construction Inc.  
19311 Wildoats Drive  
Katy, TX 77449  
832.523.5334

Surveyor



**WINDROSE**  
LAND SURVEYING & PLATTING  
3200 WILCREST, SUITE 325 | HOUSTON, TX 77042 | 713.458.2281  
FIRM REGISTRATION NO. 10108800 | WINDROSESERVICES.COM

4/25/17



CONSTRUCTION - GENERAL NOTES

- 1. FORT BEND COUNTY MUST BE INVITED TO THE PRE-CONSTRUCTION MEETING.
- 2. CONTRACTOR SHALL NOTIFY FORT BEND COUNTY ENGINEERING DEPARTMENT 48 HOURS PRIOR TO COMMENCING CONSTRUCTION AND 48 HOUR NOTICE TO ANY CONSTRUCTION ACTIVITY WITHIN THE LIMITS OF THE PAVING AT CONSTRUCTION@FORTBENDCOUNTYTX.GOV.
- 3. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS REQUIRED FROM FORT BEND COUNTY PRIOR TO COMMENCING CONSTRUCTION OF ANY IMPROVEMENTS WITHIN COUNTY ROAD RIGHT OF WAYS.
- 4. ALL PAVING IMPROVEMENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH FORT BEND COUNTY "RULES, REGULATIONS, AND REQUIREMENTS" RELATING TO THE APPROVAL AND ACCEPTANCE OF IMPROVEMENTS IN SUBDIVISIONS AS CURRENTLY AMENDED.
- 5. ALL ROAD WIDTHS, CURB RADII AND CURB ALIGNMENT SHOWN INDICATES BACK OF CURB.
- 6. A CONTINUOUS LONGITUDINAL REINFORCING BAR SHALL BE USED IN THE CURBS.
- 7. ALL CONCRETE PAVEMENT SHALL BE 5 1/2 SACK CEMENT WITH A MINIMUM COMPRESSIVE STRENGTH OF 3500 PSI AT 28 DAYS. TRANSVERSE EXPANSION JOINS SHALL BE INSTALLED AT EACH CURB RETURN AND AT A MAXIMUM SPACING OF 60 FEET.
- 8. ALL WEATHER ACCESS TO ALL EXISTING STREETS AND DRIVEWAYS SHALL BE MAINTAINED AT ALL TIMES.
- 9. 4" X 12" REINFORCED CONCRETE CURB SHALL BE PLACED IN FRONT OF SINGLE FAMILY LOTS ONLY. ALL OTHER AREAS SHALL BE 6" REINFORCED CONCRETE CURB.
- 10. AT ALL INTERSECTION LOCATIONS, TYPE 7 RAMPS SHALL BE PLACED IN ACCORDANCE WITH TXDOT PED-12A STANDARD DETAIL SHEET. A.D.A. - HANDICAP RAMPS SHALL BE INSTALLED WITH STREET PAVING AT ALL INTERSECTIONS AND COMPLY WITH CURRENT A.D.A. REGULATIONS.
- 11. CURB HEADERS ARE REQUIRED AT CURB CONNECTIONS TO HANDICAP RAMPS, WITH NO CONSTRUCTION JOINT WITHIN 5' OF RAMPS.
- 12. ALL INTERSECTIONS UTILIZING TRAFFIC CONTROL MEASURES SHALL HAVE A.D.A. WHEEL CHAIR RAMPS INSTALLED.
- 13. GUIDELINES ARE SET FORTH IN THE TEXAS "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", AS CURRENTLY AMENDED, SHALL BE OBSERVED. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADEQUATE FLAGMEN, SIGNING, STRIPING, AND WARNING DEVICES, ETC., DURING CONSTRUCTION - BOTH DAY AND NIGHT.
- 14. ALL R1-1 STOP SIGNS SHALL BE 30" X 30" WITH DIAMOND GRADE SHEETING PER TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
- 15. STREET NAME SIGNAGE SHALL BE ON A 9" HIGH SIGN FLAT BLADE WITH REFLECTIVE GREEN BACKGROUND. STREET NAMES SHALL BE UPPER AND LOWERCASE LETTERING WITH UPPERCASE LETTERS OF 6" MINIMUM AND LOWERCASE LETTERS OF 4.5" MINIMUM. THE LETTERS SHALL BE REFLECTIVE WHITE. STREET NAME SIGNS SHALL BE MOUNTED ON STOP SIGN POST.
- 16. A BLUE DOUBLE REFLECTIVE BUTTON SHALL BE PLACED AT ALL FIRE HYDRANT LOCATIONS. THE BUTTON SHALL BE PLACED 12 INCHES OFF TO THE CENTERLINE OF THE STREET ON THE SAME SIDE AS THE HYDRANT.

STORM SEWER CONSTRUCTION NOTES

- 1. STORM SEWERS SHALL BE REINFORCED CONCRETE PIPE(C-76, CLASS III), AND SHALL BE INSTALLED, BEDDED, AND BACKFILLED IN ACCORDANCE WITH THE CITY OF HOUSTON DRAWING NOS. 02317-02, 02317-03, 02317-05, 02317-06, AND 02317-07(OCT.2002) AS APPLICABLE UNLESS OTHERWISE SHOWN ON THE DRAWINGS.
- 2. ALL STORM SEWER CONSTRUCTED IN SIDELOT EASEMENT SHALL BE R.C.P.(C-76, CLASS III AND SHALL BE BEDDED IN ACCORDANCE WITH THE CITY OF HOUSTON DRAWING NOS.02317-02, 02317-03, 02317-05, 02317-06, AND 02317-07AS APPLICABLE.
- 3. ALL SEWER UNDER PROPOSED OR FUTURE PAVEMENT AND TO A POINT ONE (1) FOOT BACK OF ALL PROPOSED OR FUTURE CURBS SHALL BE BACKFILLED WITH 1-1/2 SACK CEMENT/C.Y.STABILIZED SAND TO WITH IN ONE (1) FOOT OF SUBGRADE.THE REMAINING DEPTH OF TRENCH SHALL BE BACKFILLED WITH SUITABLE EARTH MATERIAL.
- 4. ALL TRENCH BACKFILLS SHALL BE IN 8" LIFTS, WITH TESTS TAKEN AT 100 FOOT INTERVALS ON EACH LIFT, AND MECHANICALLY COMPACTED TO A DENSITY OF NOT LESS THAN 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY THE STANDARD PROCTOR COMPACTION TEST (ASTM D-698/AASHTO T99).
- 5. CIRCULAR AND ELLIPTICAL REINFORCED CONCRETE PIPE SHALL BE INSTALLED USING RUBBER GASKET JOINTS CONFORMING TO ASTM C443 AND ASTM C877 RESPECTIVELY.
- 6. ALL STORM SEWER PIPES AND INLET LEADS SHALL BE 24-INCH AND LARGER R.C.P (C-76, CLASS III).
- 7. ALL PROPOSED PIPE STUB-OUTS FROM MANHOLES AND INLETS ARE TO BE PLUGGED WITH 8" BRICK WALLS UNLESS OTHERWISE NOTED..
- 8. CONTRACTOR SHALL PROVIDE 12"MINIMUM CLEARANCE AT STORM SEWER AND WATER LINE CROSSINGS.
- 9. ADJUST MANHOLE COVERS TO GRADE CONFORMING TO REQUIREMENTS OF SECTION 02086-ADJUSTING MANHOLES, INLETS AND VALVE BOXES TO GRADE.
- 10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING, MAINTAINING AND RESTORING ANY BACK SLOPE DRAINAGE SYSTEM DISTURBED AS A RESULT OF HIS WORK.
- 11. ALL DITCHES SHALL BE REGRADED TO PROPOSED ELEVATIONS TO INSURE PROPER DRAINAGE. ALL OUTFALLS SHALL BE PROPERLY BACKFILLED AND COMPACTED. ALL DISTURBED AREA SHALL BE REGRADED, SEEDED, AND FERTILIZED.
- 12. ALL DRIVEWAYS WILL BE LOCATED TO AVOID EXISTING CURB INLET STRUCTURES.



WGA

WARD, GETZ & ASSOCIATES, LLP  
CONSULTING ENGINEERS  
TEXAS REGISTERED ENGINEERING FIRM F-9756  
2500 Tanglewilde, Suite 120  
Houston, Texas 77063  
713.789.1900

SE CONTRACTORS  
7575 FAIRCHILD RD  
RICHMOND, TEXAS 77469  
FORT BEND COUNTY

DATE:	3-9-2017
DRAWN:	NRH
CHECKED:	JGI
SCALE:	

GENERAL NOTES

SHEET

C1.1

APPROVED: *Carandine H. Se*  
for Development Coordinator  
DATE: 4/25/17



DETENTION VOLUME BASED IN % IMPERVIOUS PER FT. BEND COUNTY DRAINAGE MANUAL TABLE F-1

DRIVEWAY & BUILDING IMPERVIOUS AREA : 68,699 SF= 1.58 AC.

POND IMPERVIOUS AREA : 41,645 SF = 0.96 AC

TOTAL IMPERVIOUS AREA : 68,699 + 41,645 = 110,344 SF => **2.54 AC**

TOTAL SITE AREA : 362,088 SF => **8.31 AC**

PERCENT IMPERVIOUS COVER :  $2.54/8.31 = 0.31$ , (31%)

FROM FIGURE F-1 DETENTION VOLUME: 30% = **0.70 AC-FT/AC**

VOLUME REQUIRED: 8.31 AC x 0.70 AC-FT/AC = **5.82 AC-FT**

VOLUME PROVIDED: 6.00 AC-FT

MAXIMUM ALLOWABLE 100-YR RELEASE RATE: 0.125 CFS/ACRE

100-YR RELEASE RATE:  $0.125 \times 8.31 = 1.04$  CFS

72 HR RELEASE RATE = 72.5 GPM

#### RESTRICTOR SIZE

NO HYDRAULIC HEAD: USE MANNING'S EQUATION FOR GRAVITY FLOW.

OUTFALL PIPE DIAMETER = 12 IN.  
OUTFALL PIPE SLOPE = 0.46%  
MANNING'S "N" VALUE = 0.024

RESTRICTED FLOW:  $Q = (1.49/N) \cdot (0.25 \cdot \pi \cdot D^2)^{2/3} \cdot [(0.25 \cdot D)^{2/3}] \cdot (S^{1/2})$

RESTRICTED FLOW: Q = 1.31 CFS

ALLOWABLE FLOW: Q = 1.32 CFS+

PROPOSED FLOW: Q = 0.16 CFS

#### GRADING LEGEND:

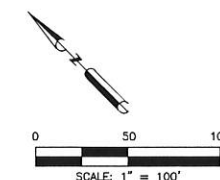
79.50	EXISTING GRADE
$\ell=79.50$	PROPOSED FLOWLINE
HB79.5	PROPOSED HIGH BANK
79.5	PROPOSED GRADE
---	SWALE

#### SWPPP LEGEND:

SC-1	STABILIZED CONSTRUCTION EXIT
x---(RFB)---	REINFORCED FILTER FABRIC FENCE
CTW	CONCRETE TRUCK WASHOUT AREA

#### DIRECTION OF FLOW:

	100-YEAR SHEET FLOW
--	---------------------



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SE CONTRACTORS  
7575 FAIRCHILD RD  
RICHMOND, TEXAS 77469  
FORT BEND COUNTY

DATE: 4-11-2017  
DRAWN: NRH  
CHECKED: JGI  
SCALE:

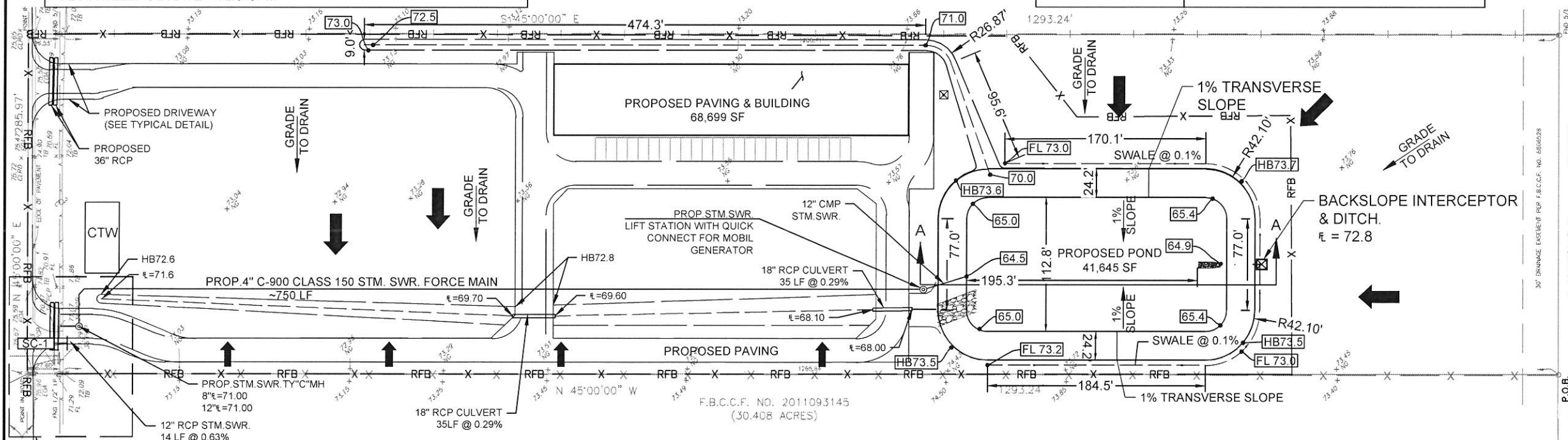


**DRAINAGE PLAN**

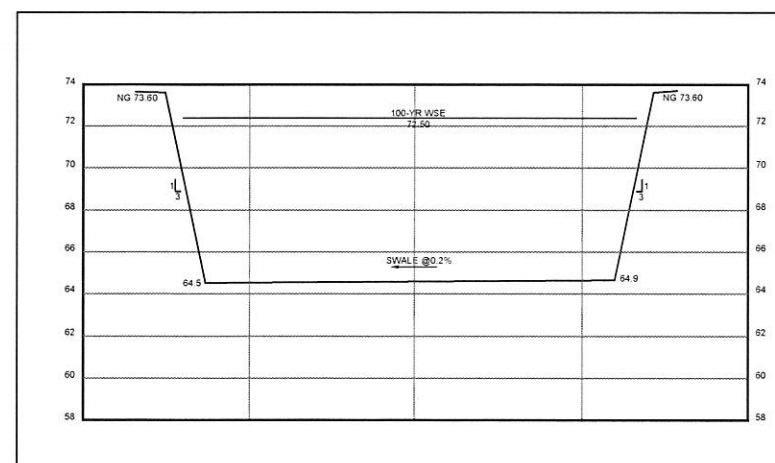
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**C2.1**

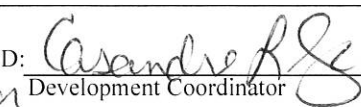
PROJECT No. 40009-021



**NOTE:**  
CONTRACTOR SHALL REPLACE EXISTING CULVERTS WITH A DOUBLE ROW OF 36" REINFORCED CONCRETE PIPES (RCP). THE PROPOSED CULVERTS SHALL BE BEDDED AND WRAPPED IN STABILIZED SAND. CONTRACTOR MUST OBTAIN NECESSARY PERMITS AND COORDINATE PROPOSED CULVERT INSTALLATION, INCLUDING PROPOSED FLOW LINE ELEVATIONS, GRADES, AND STABILIZED SAND SPECIFICATIONS WITH THE FORT BEND COUNTY ROAD AND BRIDGE DEPARTMENT, (281) 342-4513, PRIOR TO ANY WORK WITHIN THE FAIRCHILDS RD. RIGHT-OF-WAY.

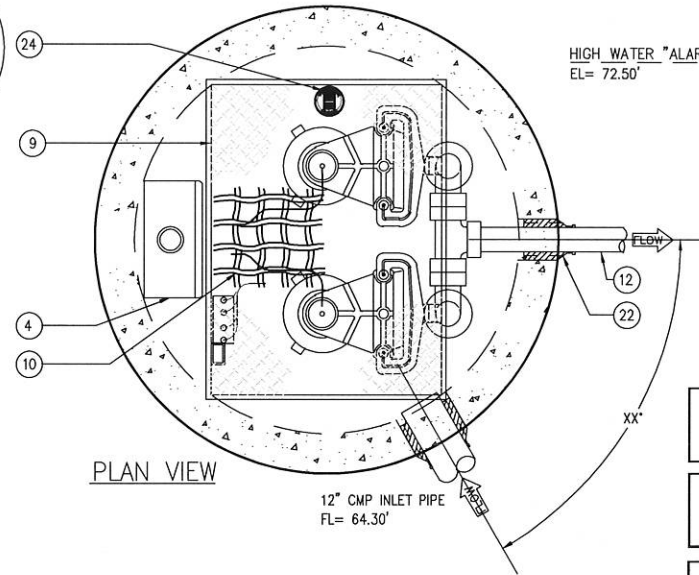
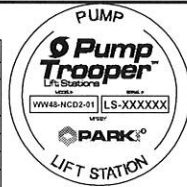


CROSS-SECTION "A-A"  
N.T.S.

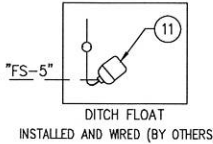
APPROVED:   
for Development Coordinator  
DATE: 4/25/17



STATION OPERATION LEVELS		
RISING LEVEL CYCLE		
WATER LEVEL ELEVATION	ACTION	PUMPS IN OPERATION
63.30'	LEAD PUMP TURNS "ON", FS-2	LEAD PUMP "ON"
64.00'	LAG PUMP TURNS "ON", FS-3	LEAD & LAG PUMPS "ON"
72.50'	HIGH WATER "ALARM", FS-4	HIGH LEVEL ALARM "ON"
72.50'	HIGH WATER IN DITCH, FS-5	ALL PUMPS "OFF"
FALLING LEVEL CYCLE		
WATER LEVEL ELEVATION	ACTION	PUMPS IN OPERATION
72.50'	DITCH FLOAT HIGH WATER, FS-5	ALL PUMPS "ON"
72.50'	HIGH WATER "ALARM", FS-4	HIGH LEVEL ALARM "OFF"
62.30'	PUMPS "OFF" LEVEL, FS-1	ALL PUMPS "OFF" LAG PUMP SWITCHES TO LEAD PUMP



HIGH WATER "ALARM" LEVEL "FS-5"  
EL= 72.50'



NOTE:  
ALL DASHED PIPING TO BE  
FURNISHED BY CONTRACTOR

NOTE:  
VERIFY ALL ELEVATIONS  
PRIOR TO FABRICATION

NOTE:  
VERIFY ALL INLET/OUTLET  
ORIENTATIONS PRIOR TO  
FABRICATION

KEYED NOTES		
MARK	QTY	DESCRIPTION
1	2	2" MYERS WHIRLOH-01
2	2	2" BASE ELBOW
3	2	STAINLESS STEEL CHAINS
4	1	DUPLEX CONTROL PANEL NEMA 4X FRP w/ GENERATOR RECEPTACLE (MOUNTED BY CONTRACTOR)
5	1	VENTED ALUMINUM PEDESTAL
6	1	SS CABLE BRACKET
7	1	48" DIA x 12'-9" DEEP CONCRETE WET WELL
8	1	48" DIA x 6" THK FLAT CONCRETE TOP
9	1	30"x36" SINGLE LEAF ALUMINUM HATCHWAY
10	1	SAFETY NET
11	1	REMOTE MOUNT DITCH FLOAT (INSTALLED AND WIRED BY OTHERS)
12	2	2" SCH 80 PVC DISCHARGE PIPE
13	2	2" SCH 80 PVC 90° ELL
14	2	SS UPPER GUIDE BRACKETS
15	2	2" PVC SWING CHECK VALVE
16	2	2" PVC BALL VALVE w/ UNIONS
17	4	SS GUIDE RAILS
18	1	3" ELECTRICAL COUPLING
19	4	FLOAT SWITCH
20	-	REBAR AS REQ'D
21	2	LIFT-OUT ASSEMBLY
22	2	RESILIENT RUBBER BOOT
23	-	ALL JOINTS MADE WATER-TIGHT w/ PLASTIC FLEXIBLE GASKET (RAM-NEK)
24	1	NAMEPLATE INDICATING: MFG: PARKUSA 888-611-PARK WWW.PARK-USA.COM MODEL: WW48-NCD2-100-16-075-21 DATE MANUFACTURED

MODEL NUMBER: ParkUSA 888-611-PARK, www.PARKUSA.com WW48-NCD2-100-16-075-21	
WET WELL SIZE (ID)	POWER CHARACTERISTICS
48 - 48" DIA	43 - 460V/3PH/60Hz
60 - 60" DIA	23 - 230V/3PH/60Hz
72 - 72" DIA	21 - 230V/1PH/60Hz
96 - 96" DIA	03 - 208V/3PH/60Hz
	01 - 208V/1PH/60Hz
PUMP CONFIGURATION	NON-CLOG PUMP SIZE
S - SIMPLEX	01 - 1.0 HP
D - DUPLEX	20 - 2.0 HP
PUMP DISCHARGE SIZE	30 - 3.0 HP
3 - 3"	50 - 5.0 HP
4 - 4"	75 - 7.5 HP
6 - 6"	
8 - 8"	
FLOW RATE CAPACITY (GPM)	PUMP HEAD CAPACITY (TDH)
100 - 100GPM	10 - 10' TDH
200 - 200 GPM	20 - 20' TDH
ETC...	ETC...

PROJECT: 7575 FAIRCHILD
CUSTOMER:
ENGINEER: WARD GETZ & ASSOCIATES
ORDER #:
PROJ #: 17-00131
DATE: 01/10/2016



STORM SEWER LIFT STATION  
SUBMERSIBLE NON-CLOG PUMP STATION

PM	DRN	ENG	DWG. NO.	REV.
DC	DJ	CA	WW48-NCD2	A
DATE	01/17			

### Specifications

CONCRETE :  
Class I/II concrete with design strength of  
4500 PSI at 28 days. Unit is of monolithic  
construction at floor, first stage of wall and  
baffle with sectional riser to required depth.

REINFORCEMENT:  
Grade 60 reinforced with steel rebar conforming  
to ASTM A615 on required centers or equal.

ALUMINUM HATCH:  
300 PSF rated, 1/4" aluminum skid-resistant floor  
plate, stainless steel tamperproof bolting & hinges  
& slamlock. (H-20 Rating Optional)

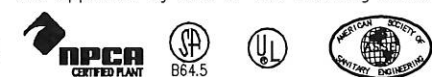
PUMPS:  
Pumps shall be centrifugal type with integral non-clog  
unit and submersible type motor. Pumps shall have a  
capacity as follows:

PUMP No.	TYPE	GPM	TDH	RPM	HP	V	PH	Hz
1	NON CLOG	100	16'	1750	3/4	230	1	60
2	NON CLOG	100	16'	1750	3/4	230	1	60

CONTROLS:  
Pump controls shall be mounted inside a UL Listed  
NEMA-4X enclosure and include circuit breakers,  
alarm circuit fuse, IEC rated motor starter, pump  
HOA, generator receptacle and alternator relay. Panel  
shall have a visual alarm beacon. Panel is designed  
for remote mounting.

### Engineering Data

Field excavation and preparation shall be completed  
prior to delivery of assembly. Use dimensional data  
as shown. All pipe, valves and fittings of the assembly  
are approved by one of the following associations:



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CONSULTING ENGINEERS  
TEXAS REGISTERED ENGINEERING FIRM F-9756  
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713.780.1900



SE CONTRACTORS  
7575 FAIRCHILD RD  
RICHMOND, TEXAS 77469  
FORT BEND COUNTY

DATE:	3-20-2017
DRAWN:	NRH
CHECKED:	JGI

SCALE:

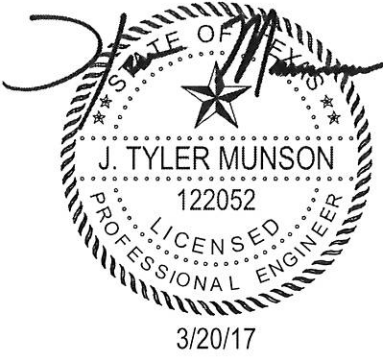
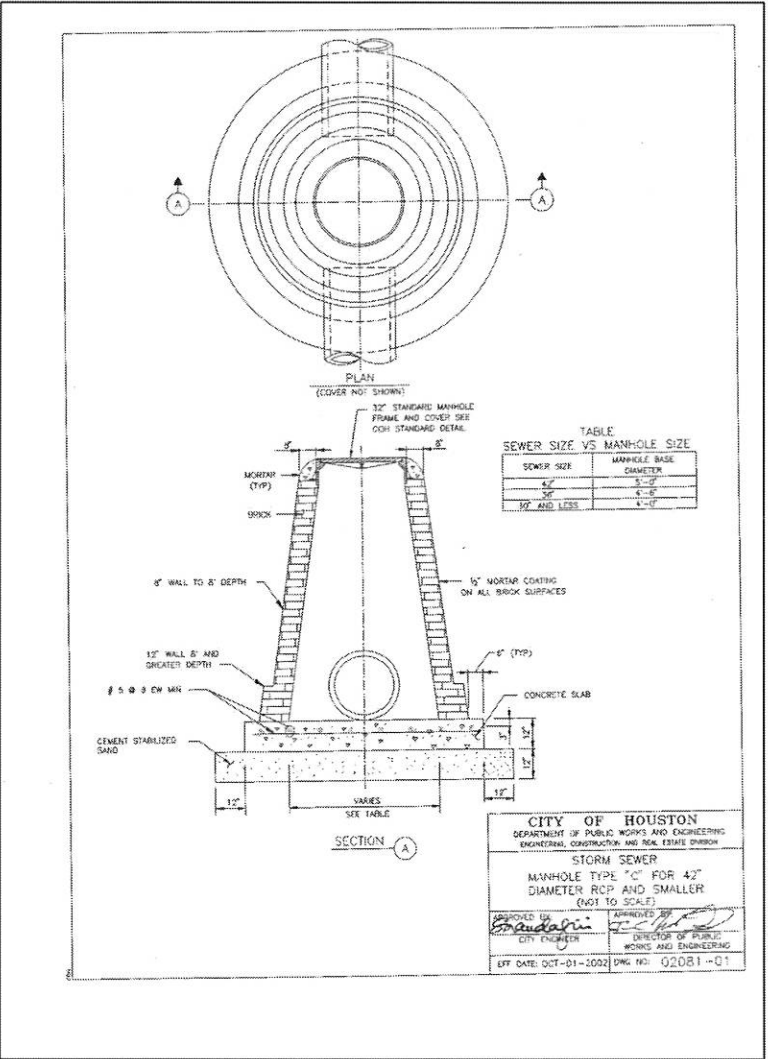
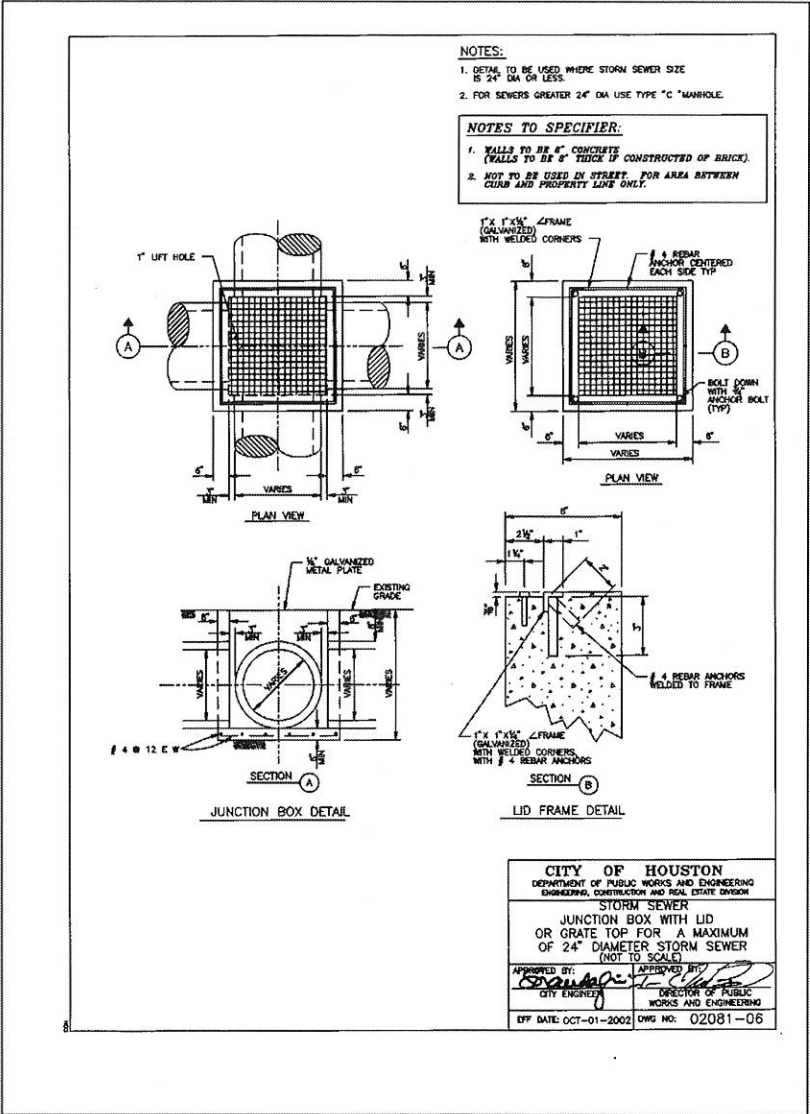
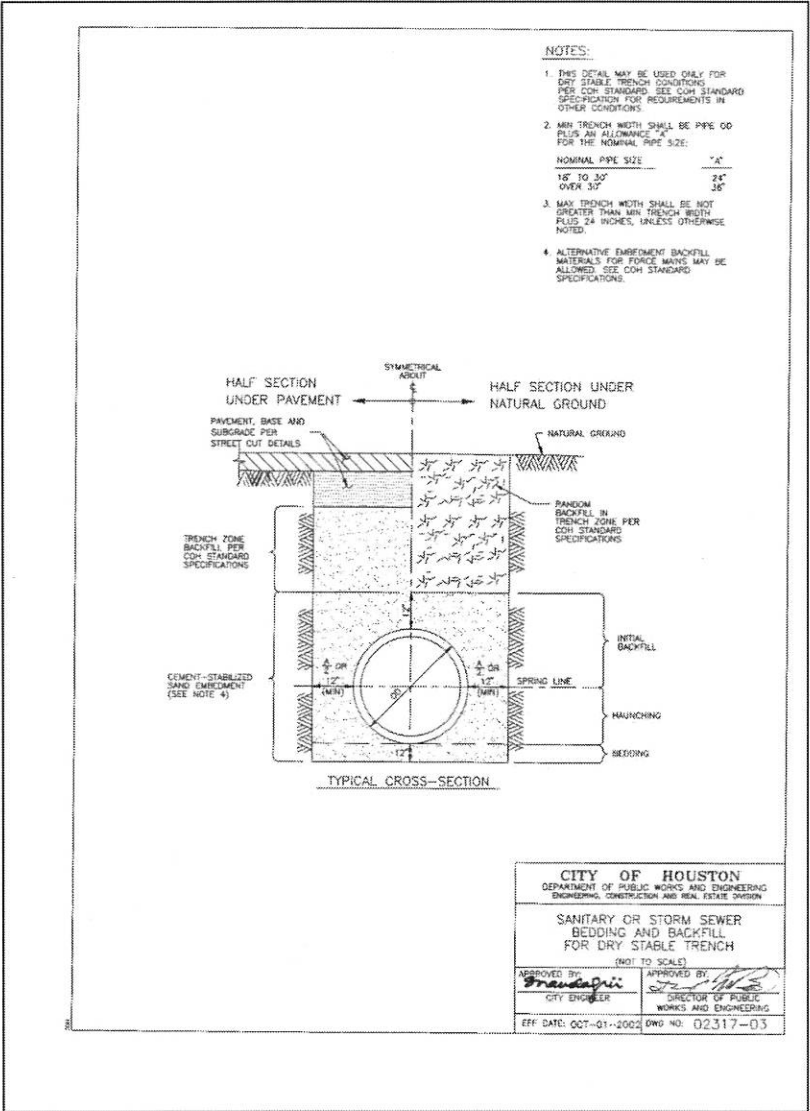
PUMP  
DETAIL

SHEET

C2.2

APPROVED: *Casandor*  
Development Coordinator  
DATE: 4/25/17





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CONSULTING ENGINEERS  
TEXAS REGISTERED ENGINEERING FIRM F-9756  
2500 Tanglewilde, Suite 120  
Houston, Texas 77063  
713.789.1900

SE CONTRACTORS  
7575 FAIRCHILD RD  
RICHMOND, TEXAS 77469  
FORT BEND COUNTY

DATE: 3-9-2017  
DRAWN: NRH  
CHECKED: JGI  
SCALE:

MISC.  
DETAILS

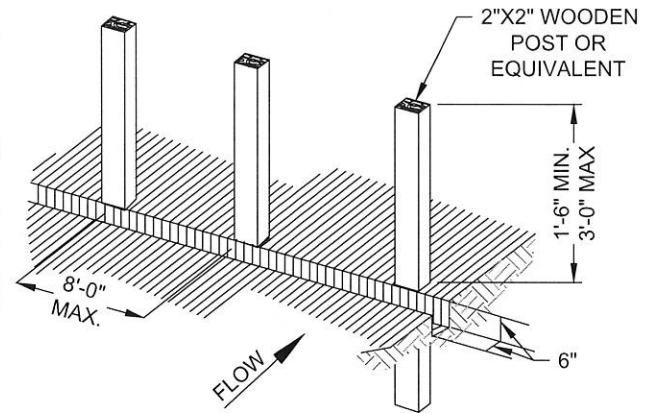
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C3.1

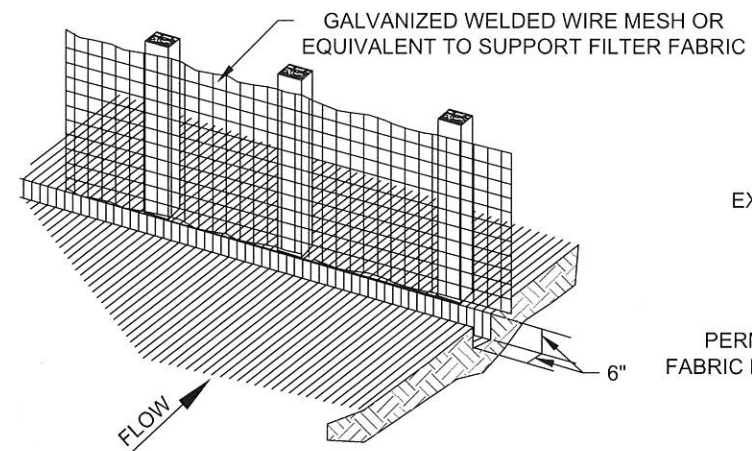
APPROVED: *Casandra R. S.*  
for Development Coordinator  
DATE: 4/25/17



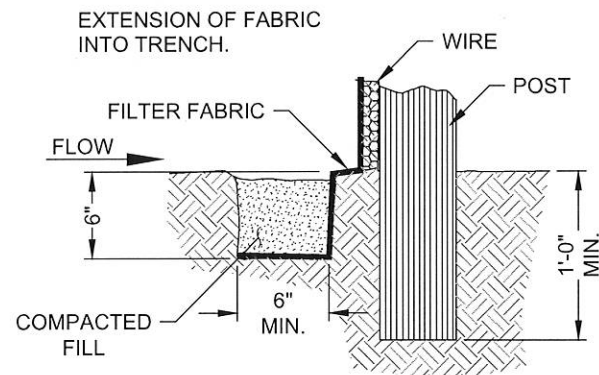
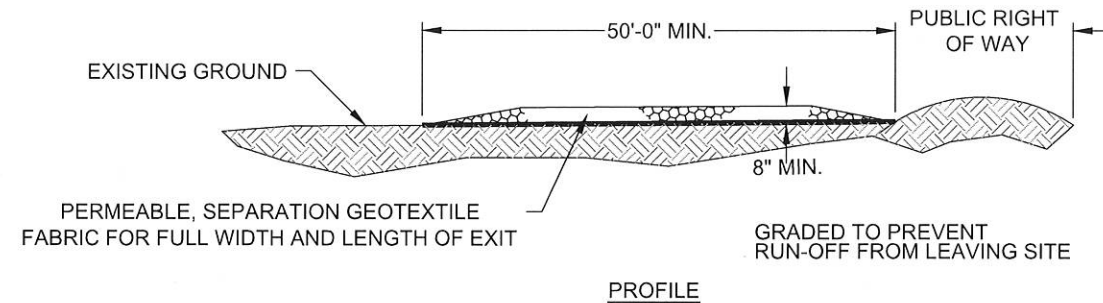
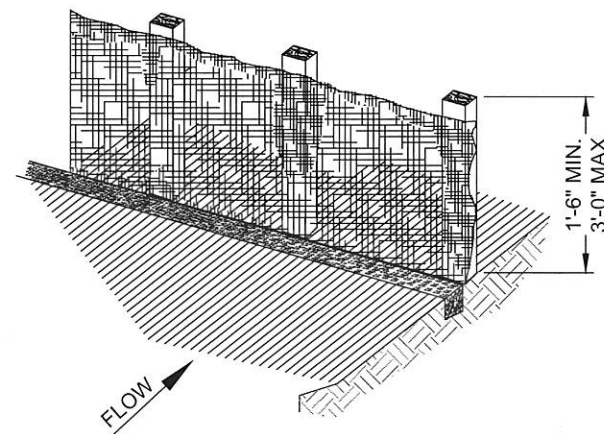
1. SET POSTS AT REQUIRED SPACING AND DEPTH. EXCAVATE 6" x 6" TRENCH UPSLOPE ALONG THE LINE OF POSTS.



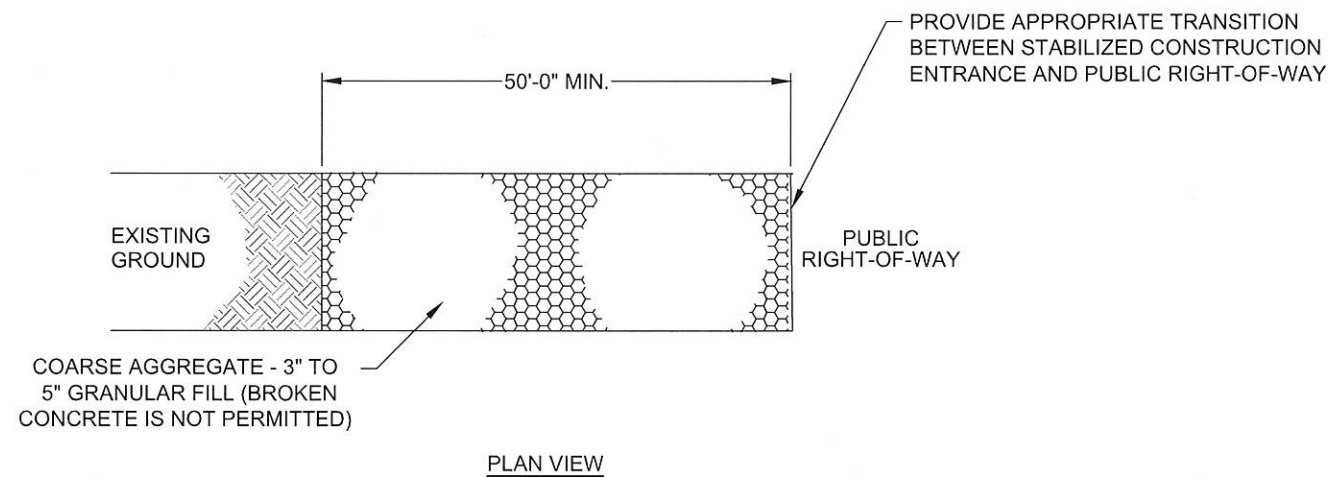
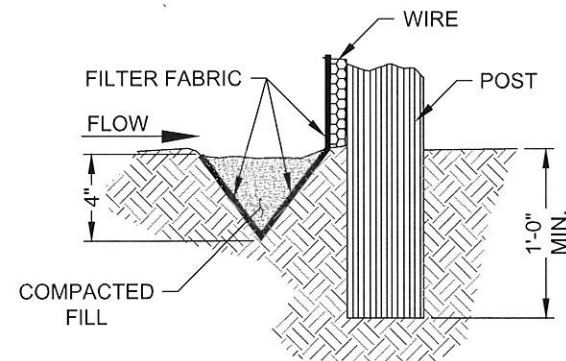
2. SECURE MESH FENCING TO POSTS



3. ATTACH FILTER MATERIAL TO WIRE FENCE AND EXTEND IT INTO THE TRENCH. BACKFILL AND COMPACT THE EXCAVATED SOIL.



ALTERNATE V-TRENCH EXTENSION OF FABRIC INTO TRENCH



#### GENERAL NOTES:

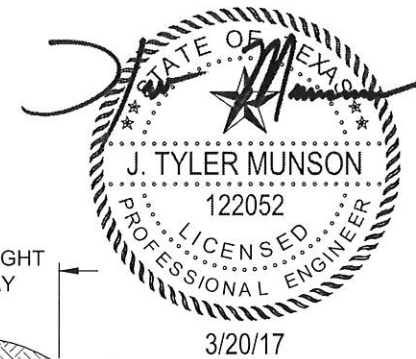
1. MINIMUM LENGTH IS AS SHOWN ON CONSTRUCTION DRAWINGS OR 50 FEET, WHICHEVER IS MORE.
2. CONSTRUCT AND MAINTAIN CONSTRUCTION EXIT WITH CONSTANT WIDTH ACROSS ITS LENGTH, INCLUDING ALL POINTS OF INGRESS OR EGRESS.
3. UNLESS SHOWN ON THE CONSTRUCTION DRAWINGS, STABILIZATION FOR OTHER AREAS WILL HAVE THE SAME AGGREGATE THICKNESS AND WIDTH REQUIREMENTS AS THE STABILIZED CONSTRUCTION EXIT.
4. WHEN SHOWN ON THE CONSTRUCTION DRAWINGS, WIDEN OR LENGTHEN STABILIZED AREA TO ACCOMMODATE A TRUCK WASHING AREA. PROVIDE OUTLET SEDIMENT TRAP FOR THE TRUCK WASHING AREA.
5. PROVIDE PERIODIC TOP DRESSING WITH ADDITIONAL COARSE AGGREGATE TO MAINTAIN THE REQUIRED DEPTH OR WHEN SURFACE BECOMES PACKED WITH MUD.
6. PERIODICALLY TURN AGGREGATE TO EXPOSE A CLEAN DRIVING SURFACE.
7. ALTERNATIVE METHODS OF CONSTRUCTION INCLUDE
  - CEMENT STABILIZED SOIL: COMPACTED CEMENT STABILIZED SOIL, LIMESTONE AGGREGATE, OR OTHER FILL MATERIAL IN AN APPLICATION OF THICKNESS OF 8 INCHES.
  - WOOD MATS: OAK OR OTHER HARDWOOD TIMBERS PLACED EDGE TO EDGE AND ACROSS SUPPORT WOODEN BEAMS WHICH ARE PLACED ON TOP OF EXISTING SOIL IN AN APPLICATION THICKNESS OF 6 INCHES.
  - STEEL MATS: PERFORATED MATS PLACED ACROSS PERPENDICULAR SUPPORT MEMBERS.

#### GENERAL NOTES:

1. SECURELY FASTEN MESH FENCING TO POSTS WITH STAPLES OR TIE WIRES.
2. SECURELY FASTEN FILTER FABRIC TO MESH FENCING.
3. WHEN TWO SECTIONS OF FILTER FABRIC ADJOIN EACH OTHER, OVERLAP 6 INCHES AT A POST, FOLD TOGETHER, AND ATTACH TO A POST.
4. REMOVE SEDIMENT DEPOSITS WHEN SILT REACHES ONE-THIRD OF THE HEIGHT OF THE FENCE IN DEPTH.

### REINFORCED FILTER FABRIC BARRIER

### STABILIZED CONSTRUCTION ACCESS



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SE CONTRACTORS  
7575 FAIRCHILD RD  
RICHMOND, TEXAS 77469  
FORT BEND COUNTY

DATE: 3-9-2017  
DRAWN: NRH  
CHECKED: JGI  
SCALE:

STORM WATER  
POLLUTION  
PREVENTION PLAN  
DETAILS

SHEET

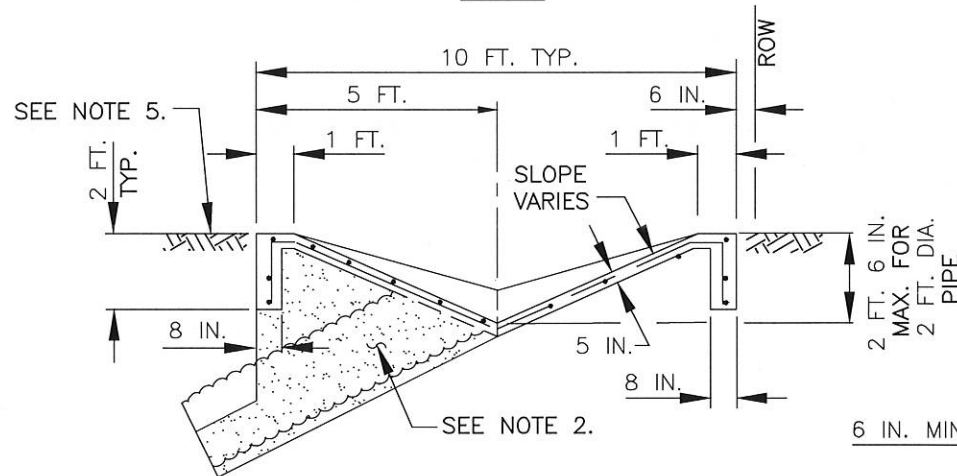
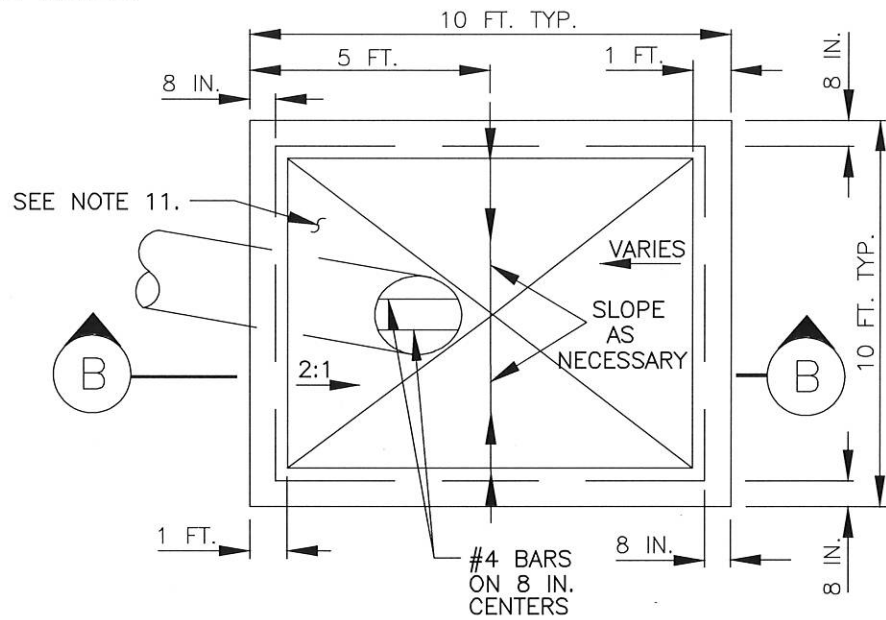
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PROJECT No. 40009-021

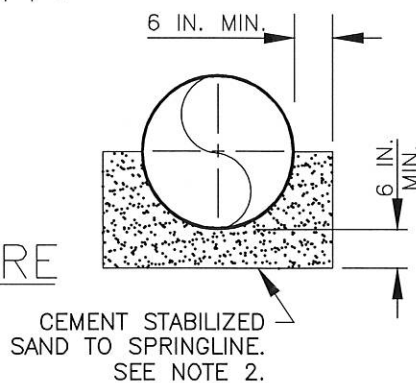


INTERCEPTOR STRUCTURE DETAIL NOTES:

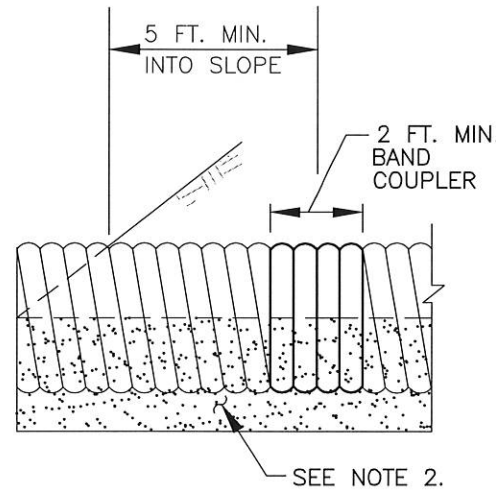
- INTERCEPTOR OUTFALL PIPES WITHIN THE HCFCO RIGHT-OF-WAY SHALL BE CMP OR HDPE PIPE IN ACCORDANCE WITH SPECIFICATION SECTION 02642- CORRUGATED METAL PIPE, HIGH DENSITY POLYETHYLENE (HDPE) PIPE IN ACCORDANCE WITH SPECIFICATION SECTION 2505-HIGH DENSITY POLYETHYLENE, OR APPROVED EQUAL. USE TABLE BELOW FOR CORRUGATED GALVANIZED STEEL PIPE.
- PROVIDE AND PLACE CEMENT STABILIZED SAND IN ACCORDANCE WITH SPECIFICATION SECTION 02321-CEMENT STABILIZED SAND AND SECTION 02316 - STRUCTURAL EXCAVATING.
- EXCAVATION, FILL AND BACKFILL FOR STORM SEWER OUTFALLS SHALL BE IN ACCORDANCE WITH SPECIFICATION SECTION 02316-STRUCTURAL EXCAVATING AND BACKFILLING.
- CONCRETE SHALL BE STRUCTURAL CONCRETE IN ACCORDANCE WITH SPECIFICATION SECTION 03310-CONCRETE.
- INTERCEPTOR STRUCTURES:
  - ADJUST LENGTH AND WIDTH IN FIELD AS NECESSARY.
  - 2- FEET DEEP X 8-INCH WIDE TOE ALL AROUND THE STRUCTURE.
  - STEEL REINFORCING-#4 BARS (GRADE 40) AT 12 INCHES ON CENTER EACH WAY.
  - ANY INTERCEPTOR OUTFALL PIPE LARGER THAN MAXIMUM SIZE INDICATED REQUIRES A SEPARATE DETAIL.
  - MATCH TOP OF CONCRETE WITH NATURAL GROUND.
- IN DETENTION BASINS, SET FLOWLINE OF OUTFALL AT TOE OF THE SLOPE. IN CHANNEL, USE ELEVATION INDICATED IN THE TABLE OR 1 FOOT ABOVE NORMAL WATER LEVEL WHICH EVER IS HIGHER.
- SEE CONCRETE CHANNEL LINING DETAIL SHEET FOR CMP OUTFALL DETAILS THROUGH CONCRETE CHANNEL LINING.
- CONCRETE PAD AROUND TYPE "B" INLET: PAID FOR AS CONCRETE INTERCEPTOR STRUCTURE PER UNIT PRICE SCHEDULE. TYPE "B" INLET BOX, COH DWG. NO. 02632-02 WITH GRATE TOP, VULCAN FOUNDRY COMPANY, V-4880-1 OR APPROVED EQUAL, APPROX. 489 SQ.IN. OPENING.
- BACKSLOPE SWALE AND INTERCEPTOR STRUCTURE ELEVATIONS AND LOCATIONS SHOWN ON THE PLANS ARE APPROXIMATE. FINAL ELEVATIONS AND LOCATIONS SHALL BE FIELD VERIFIED BY THE ENGINEER PRIOR TO INSTALLATION.
- STRUCTURAL CONCRETE WITH #4 BARS (GRADE 40) 12 INCH O.C. EACH WAY - FOR COLLARS ONLY.
- EPOXY CLEAN WATER CLEAR CHOICE LOGO BUTTON ON INTERCEPTORS. LOCATION TO BE DETERMINED BY THE ENGINEER.



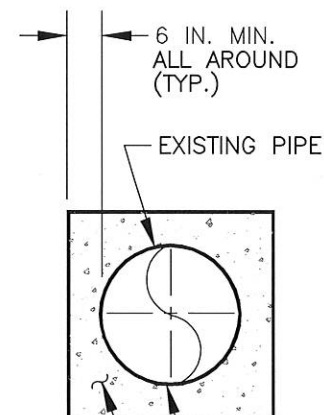
TYPICAL BACKSLOPE  
INTERCEPTOR STRUCTURE  
(24 INCH & 30 INCH ONLY)



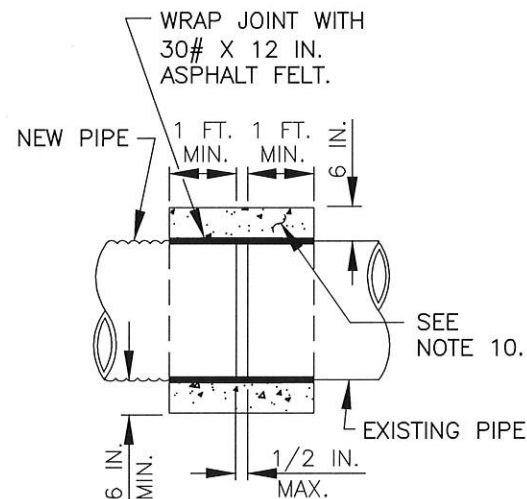
F SECTION  
BEDDING  
CMP DETAIL



CMP BAND  
COUPLER DETAIL



BEDDING CONCRETE  
PIPE DETAIL



CONCRETE COLLAR  
DETAIL



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FORT BEND COUNTY

DATE: 3-9-2017  
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SCALE:

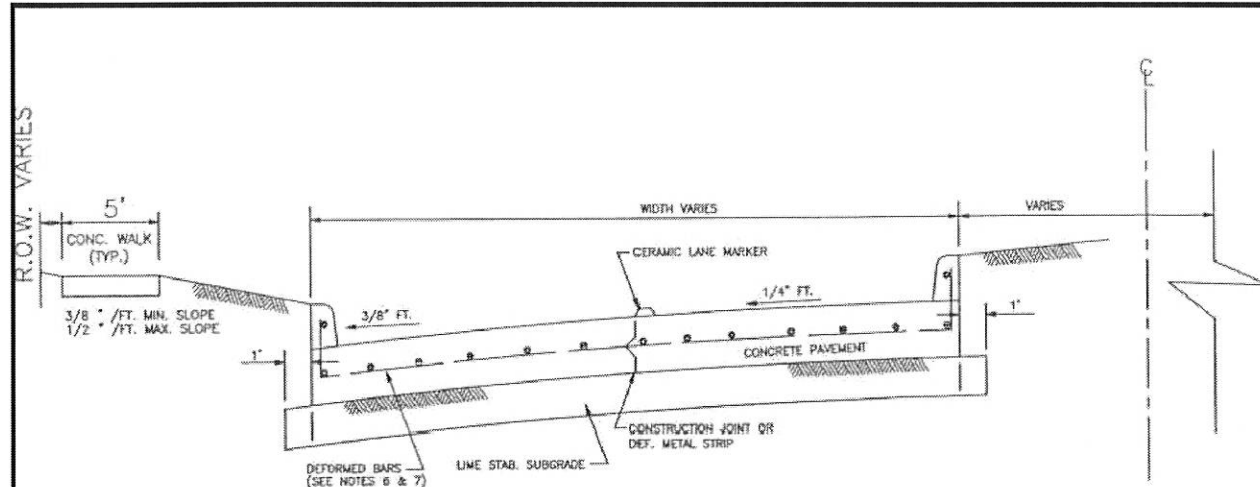
BACKSLOPE  
DETAILS

SHEET

C3.3

PROJECT No. 40009-021

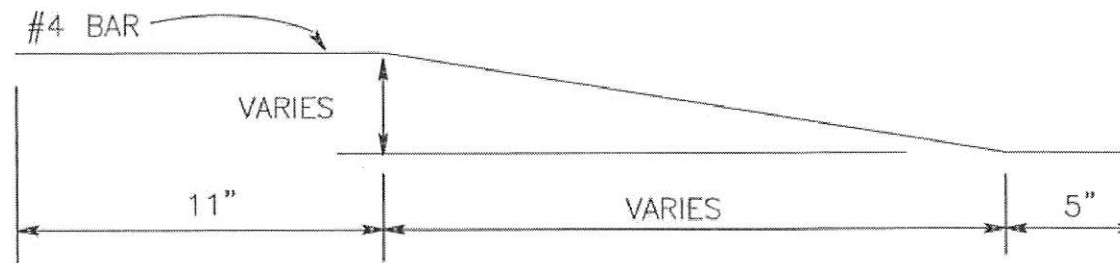
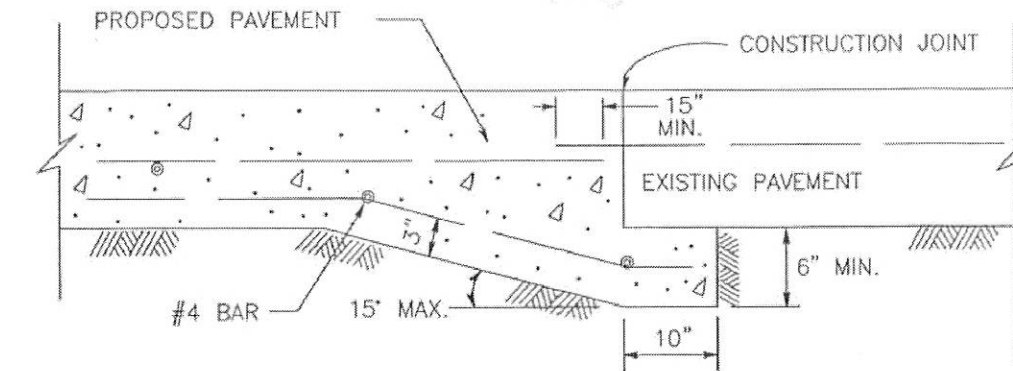




HALF SECTION SYMMETRICAL ABOUT CENTERLINE

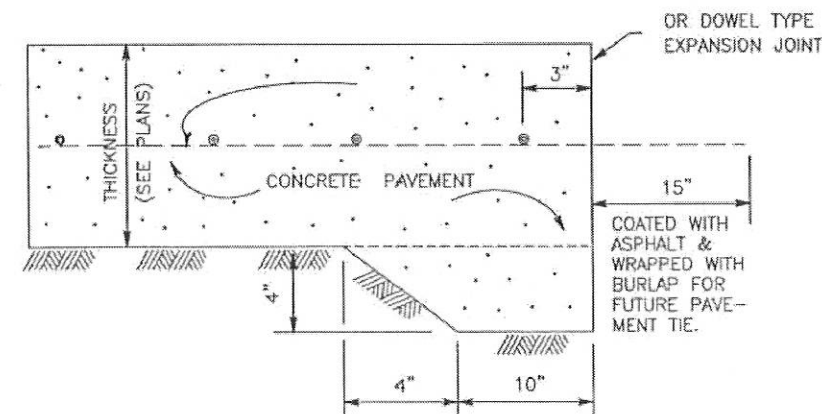
NOTES:

1. ALL REINFORCING STEEL SHALL CONFORM TO ASTM A-615, CURRENT GRADE 60. MINIMUM LAP AT ALL SPLICES SHALL BE A MINIMUM OF 16" U.N.O. LAP SPLICES SHALL BE STAGGERED. ADJACENT LAP SPLICES ARE NOT ACCEPTABLE.
2. CONCRETE SHALL BE CLASS "P" CONCRETE, FC=3000 PSI (28 DAY STRENGTH), (500 PSI MINIMUM FLEXURAL STRENGTH AT 7 DAY). REFER TO SPECIFICATION SECTION 03301.
3. THE LOCATION OF CONSTRUCTION JOINTS AND DEFORMED METAL STRIPS MAY BE VARIED, WITH THE APPROVAL OF THE FORT BEND COUNTY ENGINEERING DEPARTMENT, TO SUIT THE PROPOSED CONSTRUCTION METHODS OF THE CONTRACTOR. THE MAXIMUM WIDTH BETWEEN LONGITUDINAL JOINTS SHALL NOT EXCEED 14'-0".
4. 6" LIME STABILIZED SUBGRADE SHALL BE A MINIMUM OF 6% LIME, UNLESS SPECIFICALLY APPROVED BY THE FORT BEND COUNTY ENGINEERING DEPARTMENT. REFER TO SPECIFICATION SECTION 02244.
5. THE SLOPE BEHIND PAVEMENT MAY BE INCREASED, WITH THE APPROVAL OF THE FORT BEND COUNTY ENGINEERING DEPARTMENT.
6. FOR 7" PAVING, USE 1/2" DEFORMED BARS, 24" CENTER-TO-CENTER, 10" LAPS (18" CENTER-TO-CENTER FOR MAJOR THOROUGHFARES).
7. FOR 6" PAVING, USE 3/8" DEFORMED BARS, 24" CENTER-TO-CENTER, 10" LAPS.
8. CONCRETE WALK (REFER TO DETAIL FBC-011).



A: UNDERCUT BAR LAYOUT

SEE ROADWAY SECTION FOR REBAR



B: TYPICAL HEADER

TYPICAL DOUBLE  
ROADWAY SECTION

APPROVED BY:	DRAWN BY:
LOUIS HOOD	L. BRDECKA
DATE DRAWN: 2-1-94	DRAWING NO.:
REVISED:	FBC-002

PAVEMENT HEADER/  
UNDERCUT

APPROVED BY:	DRAWN BY:
LOUIS HOOD	L. BRDECKA
DATE DRAWN: 2-1-94	DRAWING NO.:
REVISED:	FBC-007

FORT BEND COUNTY ENGINEERING DEPARTMENT

FORT BEND COUNTY ENGINEERING DEPARTMENT

APPROVED: *Casand R*  
for Development Coordinator  
DATE: 4/25/17

**WGA**  
WARD, GETZ & ASSOCIATES, LLP  
CONSULTING ENGINEERS  
TEXAS REGISTERED ENGINEERING FIRM F-9756  
2500 Tanglewilde, Suite 120  
Houston, Texas 77063  
713.789.1900



SE CONTRACTORS  
7575 FAIRCHILD RD  
RICHMOND, TEXAS 77469  
FORT BEND COUNTY

DATE:	3-9-2017
DRAWN:	NRH
CHECKED:	JGI
SCALE:	

PAVEMENT  
DETAILS

SHEET

C4.1

PROJECT No. 40009-021



A. USE FOR ALL PROPOSED EXISTING CURB REMOVAL FOR DRIVEWAYS (PLAN VIEW NOT TO SCALE)



1. COMPACT SUBGRADE FOR PROPOSED DRIVEWAY CONNECTION FROM PROPOSED SAW CUT AT EXISTING PAVEMENT TO R.O.W. LINE. COMPACT TO 95% OF STANDARD PROCTOR DENSITY (+/- 2% OPT. MOISTURE). THE COUNTY ENGINEER RESERVES THE RIGHT TO REQUIRE LABORATORY TESTS TO BE CONDUCTED.
2. PROPOSED DRIVEWAY REINFORCING STEEL IS TO BE #4 DEFORMED REINFORCING BARS (ASTM A615, GRADE 60, UNLESS NOTED) SPACED AT 24" C.C., EACH WAY, WITH 12" MINIMUM LAP FROM PROPOSED SAW CUT TO R.O.W. LINE.
3. PROPOSED DRIVEWAY SHALL BE CONSTRUCTED WITH PORTLAND CEMENT (5 SACKS (3000 PSI) OF CEMENT PER CUBIC YARD OF CONCRETE), CLASS "A" STRUCTURAL (REFER TO SPECIFICATION 03301), 7" THICK, FROM PROPOSED SAW CUT TO R.O.W. LINE.
4. PROPOSED SIDEWALK SHALL BE CONSTRUCTED WITH PORTLAND CEMENT (5 SACKS (3000 PSI) OF CEMENT PER CUBIC YARD OF CONCRETE), CLASS "A" STRUCTURAL (REFER TO SPECIFICATION 03301), 4" THICK.
5. FOR TYPICAL SIDEWALK DETAIL SEE FBC-011.

REVISED BY: J. NETARDUS  
DATE REVISED: 4-7-09  
DRAWING NO.  
FBC-025A

APPROVED: Asand  
for Development Coordinator

DATE: 4/25/17

DATE:	3-9-2017
DRAWN:	NRH
CHECKED:	JGI
SCALE:	

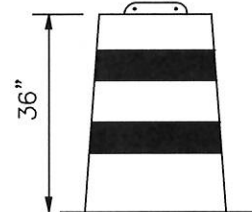
## C4.2

**WARD, GETZ & ASSOCIATES, LLLP**  
CONSULTING ENGINEERS  
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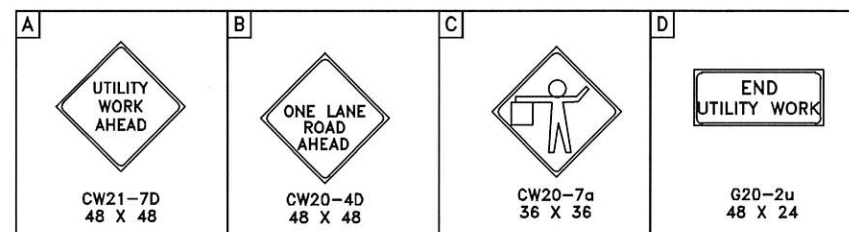




MOUNTING HOLES  
FOR VERTICAL  
PANEL OR CHEVRON



PLASTIC DRUM

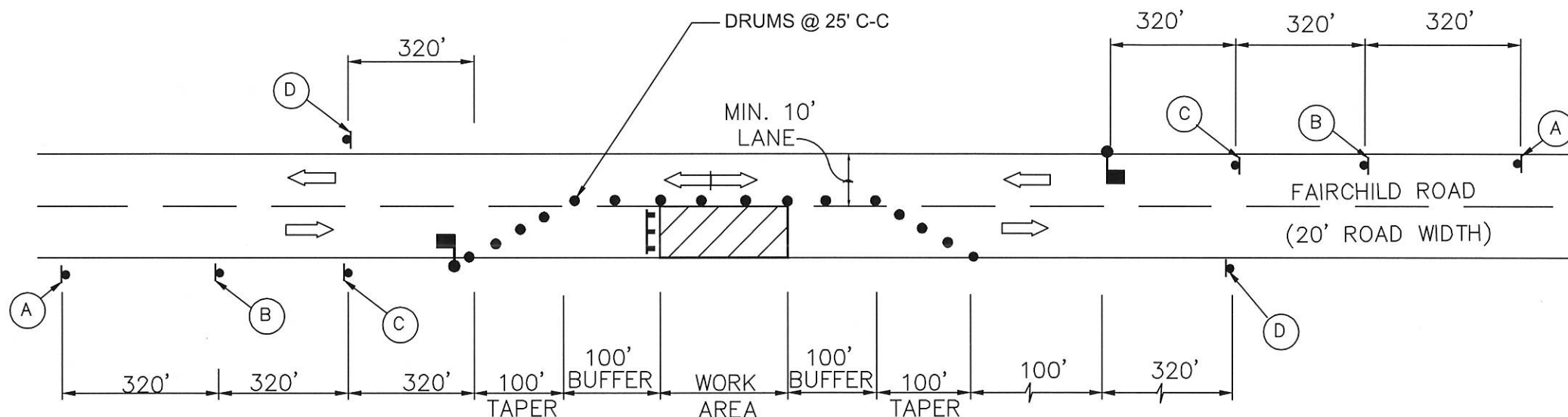


LEGEND  
(TYPICAL)

- PLASTIC DRUM (see spacing for channelizing devices)
- OFF-DUTY UNIFORMED POLICE OFFICER
- TYPE III BARRICADE
- TUBULAR MARKER

Posted Speed	Formula	Minimum Desirable Taper Lengths			Suggested Maximum Spacing of Device	
		10' Offset	11' Offset	12' Offset	On a Taper	On a Tangent
30		150'	165'	180'	30	60'-75'
35		205'	225'	245'	35	70'-90'
40		265'	295'	320'	40	80'-100'
45		450'	495'	540'	45	90'-110'
50		500'	550'	600'	50	100'-125'
55		550'	605'	660'	55	110'-140'
60		600'	660'	720'	60	120'-150'
65		650'	715'	780'	65	130'-165'

Street	Posted Speed
FAIRCHILD ROAD	45 MPH



## ONE LANE - TWO WAY/FLAGGING OPERATION

(DAY TIME WORKING HOURS ONLY)

### TRAFFIC NOTES

- Contractor shall provide and install traffic control devices in conformance with part VI of the Texas Manual on Uniform Traffic Control Devices (Texas MUTCD, most recent edition with revisions) during construction.
- No lanes shall be closed from 7:00 a.m. to 9:00 a.m. and 4:00 p.m. to 6:30 p.m. Monday thru Friday.
- Contractor shall cover open excavations with steel plates anchored properly during non-working hours, and open lanes for normal traffic flow.
- Off-duty Uniformed Police Officers/flagger(s) are required to direct traffic when lanes are blocked.
- If the contractor chooses to use a different method of "Traffic Control Plans" during the construction than what is outlined in the contract drawings, (s)he shall be responsible to prepare and submit an alternate set of plans\* to HCPID Traffic Section for approval ten working days prior to implementation.  
\*These plans shall be drawn to scale on reproducible mylars and sealed by a Licensed Engineer in the State of Texas. Plans will become a part of the contract drawings.
- Approved copies of Traffic Control Plans shall be available for inspection at job site at all times.

### NOTE:

CONTRACTOR SHALL REPLACE EXISTING CULVERTS WITH A DOUBLE ROW OF 36" REINFORCED CONCRETE PIPES (RCP). THE PROPOSED CULVERTS SHALL BE BEDDED AND WRAPPED IN STABILIZED SAND. CONTRACTOR MUST OBTAIN NECESSARY PERMITS AND COORDINATE PROPOSED CULVERT INSTALLATION, INCLUDING PROPOSED FLOW LINE ELEVATIONS, GRADES, AND STABILIZED SAND SPECIFICATIONS WITH THE FORT BEND COUNTY ROAD AND BRIDGE DEPARTMENT, (281) 342-4513, PRIOR TO ANY WORK WITHIN THE FAIRCHILDS RD. RIGHT-OF-WAY.



APPROVED: *Cassandra R. G.*  
Development Coordinator

DATE: 4/25/17

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SE CONTRACTORS  
7575 FAIRCHILD RD  
RICHMOND, TEXAS 77469  
FORT BEND COUNTY

DATE: 3-24-2017  
DRAWN: NRH  
CHECKED: JGI  
SCALE:

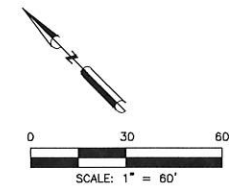
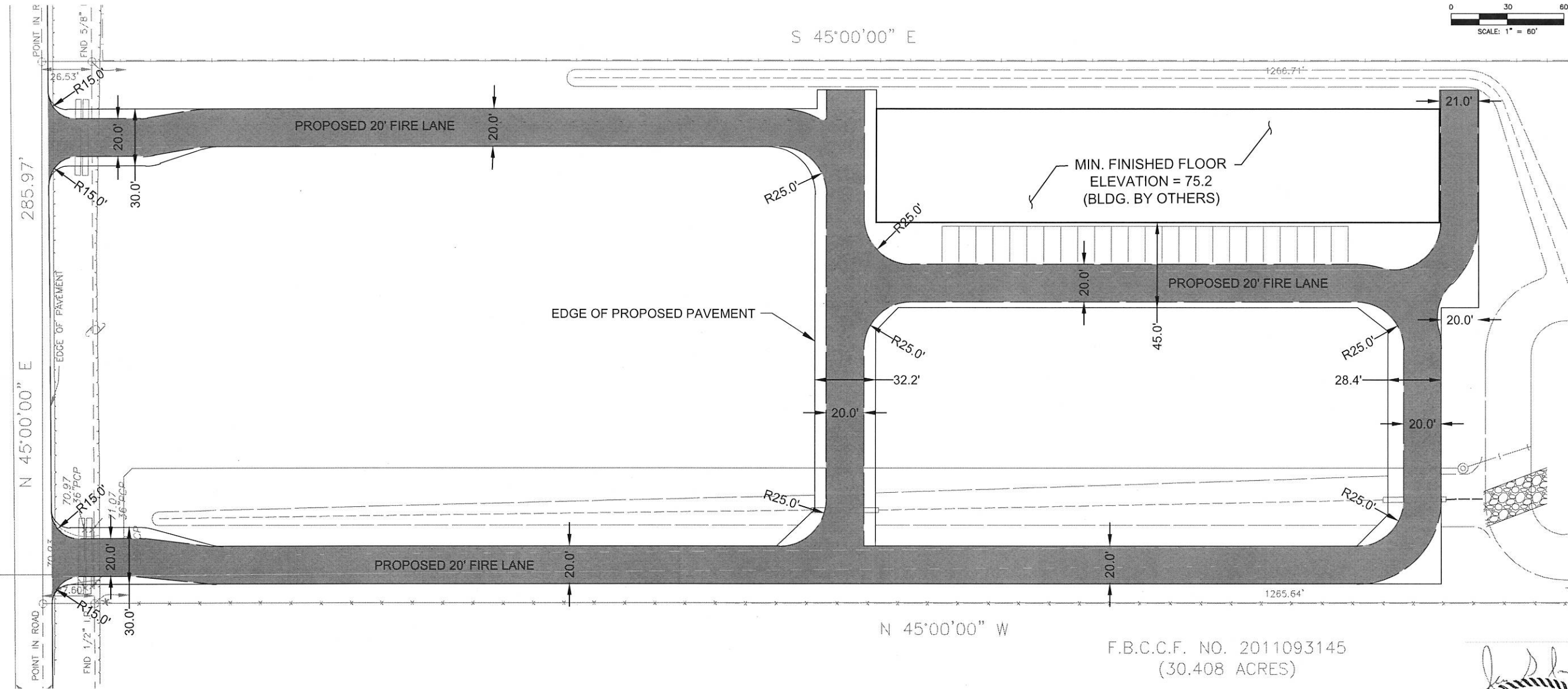
TRAFFIC  
CONTROL  
PLAN

SHEET

C5.1

PROJECT No. 40009-021





# WGA

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SE CONTRACTORS  
7575 FAIRCHILD RD  
RICHMOND, TEXAS 77469  
FORT BEND COUNTY

DATE: 4-11-2017  
DRAWN: NRH  
CHECKED: JGI  
SCALE:



APPROVED: *Casandra S.*  
for Development Coordinator  
DATE: 4/25/17

**FIRE  
ACCESS  
PLAN**

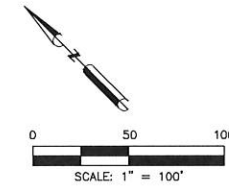
SHEET

C6.1

PROJECT No. 40009-021



<b>DESIGN VALUES</b>	
FACILITIES	CABINET SHOP WITH 24 EMPLOYEES AT 10 GPP = 240 GPD
DAILY FLOW	240 GPD
AREA REQUIRED (SQ. FT.)	5,333.3
AREA PROPOSED (SQ. FT.)	5,654.87
<b>COMPONENTS</b>	
PRE-TREATMENT	335-GALLON TRASH TANK INCLUDED IN PACKAGE
AEROBIC TREATMENT UNIT	CLEARSTREAM 600 ALL-IN-ONE OR EQUIVALENT
PUMP TANK	768 GALLON INCLUDED IN UNIT
SUPPLY LINE	1" SCH 40 PVC
SPRAY HEADS	WEATHERMATIC PLUS LOW ANGLE ADJUSTED AS SHOWN
TIMER	YES
DISINFECTION	CHLORINATION
BOD CALCULATIONS	0.00024 X 8.32 X 590 = 1.18 LBS 600 ATU TREATS - 1.25 LBS - WE WILL USE 1
<b>PUMP TANK PARAMETERS</b>	
INCLUDED IN PACKAGE.	
INTERNAL TANK DIMENSIONS:	
VOLUME OF PUMP CHAMBER IS 768 GALLONS PER MANUFACTURER	
DEPTH = 58"	AVERAGE GALLONS PER IN = 13.24
PUMP OFF = 32"	PUMP ON = 36" ALARM OVERRIDE = 51"
RESERVE CAPACITY	93 GALLONS
DOSING VOLUME	251 GALLONS
STATIC VOLUME	424 GALLONS



WGA

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A - TWO WAY CLEAN OUT  
B - NUWATER 600 ATU OR EQUIVALENT  
\*\* ALL SPRAY RADIUS TO BE 30' \*\*

