Fort Bend County
Engineering Department
301 Jackson Suite 401
Richmond, Texas 77469
281.633.7500
Permits@fortbendcountytx.gov

REVIEW BY FORT BEND COUNTY COMMISSIONERS COURT

[ ] **Right of Way Permit**

[X] **Commercial Driveway Permit**

Permit No: 2018-20743

Applicant: **Haider Zaman / C.ENG, Inc.**

Job Location Site: **15545 West Bellfort, Sugar Land, TX 77498**

Bond No. [redacted] **Date of Bond:** **6/6/2018** **Amount:** **$5,000.00**

The above applicant came to make use of certain Fort Bend County property subject to, "The Order Regulating the Laying, Construction, Maintenance, and Repair of Buried Cables, Conduits, and Pole Lines, In, Under, Across or Along Roads, Streets, Highways, and Drainage Ditches in Fort Bend County, Texas, Under the Jurisdiction of the Commissioners Court of Fort Bend County, Texas," as passed by the Commissioners Court of Fort Bend County, Texas, of the Minutes of the Commissioners Court of Fort Bend County, Texas, to the extent that such order is not inconsistant with Chapter 181, Vernon's Texas Statutes and Codes Annoted.

Notes:

1. Evidence of review by the Commissioners Court must be kept on the job site and failure to do so constitutes grounds for job shutdown.
2. Written notices are required:
   a. 48 hours in advance of construction start up, and
   b. When construction is completed and ready for final inspection, submit notification to Permit Administrator thru MyGovernmentOnline.org portal.
3. This permit expires one (1) year from date of permit if construction has not commenced.

On this 26th day of June, 2018, Upon Motion of Commissioner _____, seconded by Commissioner _____, duly put and carried, it is ORDERED, ADJUDGED AND DECREED that said notice of said above purpose is hereby acknowledged by the Commissioners Court of Fort Bend County, Texas, and that said notice be placed on record according to the regulation order thereof.

Signature

By: _____
County Engineer

N/A

By: _____
Drainage District Engineer/Manager

Presented to Commissioners Court and approved.

Date Recorded _____ Comm. Court No. _____

Clerk of Commissioners Court

By: _____
Deputy

Fort Bend County
Engineering Department
301 Jackson Suite 401
Richmond, Texas 77469
281.633.7500
Permits@fortbendcountytx.gov

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

[ ] **Right of Way Permit**

[X] **Commercial Driveway Permit**

Permit No: 2018-20743

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] a. Name of road, street, and/or drainage ditch affected.
- [X] b. Vicinity map showing course of directions
- [X] c. Plans and specifications

(2) BOND:

- [ ] County Attorney, approval when applicable.
- [ ] Perpetual bond currently posted. Bond No: _____ Amount: _____
- [X] Performance bond submitted. Bond No: [redacted] Amount: $5,000.00
- [ ] 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.

_____ 6/15/2018
Permit Administrator 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, Haider Zaman whose (*address, phone*) is 17207 Kininvie Crossing RICHMOND, TX 77407 Texas, hereinafter called the Principal, and Travelers Casualty and Surety Company of America, a Corporation existing under and by virtue of the laws of the state of Texas and authorized to do an indemnifying business in the state of Texas, and whose principal office is located at (*name/address/phone*) One Tower Square Hartford, CT 06183, whose officer residing in the State of Texas, authorized to accept service in all suits and actions brought whining said state is George Adams and whose address is 4501 Cartwright Rd., Suite 402 Missouri City, TX 77459, 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 Five Thousand Dollars ($5,000.00) current, lawful money of the United Stated 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 day 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 06 **day of** June **,** 2018 **.**

Haider Zaman

PRINCIPAL

BY

Travelers Casualty and Surety Company of America

SURETY

BY Matthew Bocklage

TRAVELERS

POWER OF ATTORNEY

Farmington Casualty Company
Fidelity and Guaranty Insurance Company
Fidelity and Guaranty Insurance Underwriters, Inc.
St. Paul Fire and Marine Insurance Company
St. Paul Guardian Insurance Company

St. Paul Mercury Insurance Company
Travelers Casualty and Surety Company
Travelers Casualty and Surety Company of America
United States Fidelity and Guaranty Company

Surety Bond No. [redacted]

Principal: **Haider Zaman**
17207 Kininvie Crossing RICHMOND, TX 77407

Obligee: **County Judge of Fort Bend County**
301 Jackson St., Suite 401 Department of Engineering
RICHMOND, TX 77469

KNOW ALL MEN BY THESE PRESENTS: That Farmington Casualty Company, St. Paul Fire and Marine Insurance Company, St. Paul Guardian Insurance Company, St. Paul Mercury Insurance Company, Travelers Casualty and Surety Company, Travelers Casualty and Surety Company of America, and United States Fidelity and Guaranty Company, are corporations duly organized under the laws of the State of Connecticut, that Fidelity and Guaranty Insurance Company is a corporation duly organized under the laws of the State of Iowa, and that Fidelity and Guaranty Insurance Underwriters, Inc. is a corporation duly organized under the laws of the State of Wisconsin (herein collectively called the "Companies"), and that the Companies do hereby make, constitute and appoint **Matthew Bocklage**, of the City of **Columbia**, State of **MO**, their true and lawful Attorney(s)-in-Fact, to sign, execute, seal and acknowledge the surety bond referenced above.

IN WITNESS WHEREOF, the Companies have caused this instrument to be signed and their corporate seals to be hereto affixed, this **7th** day of **July, 2016.**

Farmington Casualty Company
Fidelity and Guaranty Insurance Company
Fidelity and Guaranty Insurance Underwriters, Inc.
St. Paul Fire and Marine Insurance Company
St. Paul Guardian Insurance Company

St. Paul Mercury Insurance Company
Travelers Casualty and Surety Company
Travelers Casualty and Surety Company of America
United States Fidelity and Guaranty Company

State of Connecticut

City of Hartford ss.

By: _____
Robert L. Raney, Senior Vice President

On this the **7th** day of **July, 2016**, before me personally appeared **Robert L. Raney**, who acknowledged himself to be the Senior Vice President of Farmington Casualty Company, Fidelity and Guaranty Insurance Company, Fidelity and Guaranty Insurance Underwriters, Inc., St. Paul Fire and Marine Insurance Company, St. Paul Guardian Insurance Company, St. Paul Mercury Insurance Company, Travelers Casualty and Surety Company, Travelers Casualty and Surety Company of America, and United States Fidelity and Guaranty Company, and that he, as such, being authorized so to do, executed the foregoing instrument for the purposes therein contained by signing on behalf of the corporations by himself as a duly authorized officer.

In Witness Whereof, I hereunto set my hand and official seal.

My Commission expires the **30th** day of **June, 2021.**

MARIE C. TETREAULT NOTARY PUBLIC CONNECTICUT

Marie C. Tetreault
Marie C. Tetreault, Notary Public

This Power of Attorney is granted under and by the authority of the following resolutions adopted by the Boards of Directors of Farmington Casualty Company, Fidelity and Guaranty Insurance Company, Fidelity and Guaranty Insurance Underwriters, Inc., St. Paul Fire and Marine Insurance Company, St. Paul Guardian Insurance Company, St. Paul Mercury Insurance Company, Travelers Casualty and Surety Company, Travelers Casualty and Surety Company of America, and United States Fidelity and Guaranty Company, which resolutions are now in full force and effect, reading as follows:

RESOLVED, that the Chairman, the President, any Vice Chairman, any Executive Vice President, any Senior Vice President, any Vice President, any Second Vice President, the Treasurer, any Assistant Treasurer, the Corporate Secretary or any Assistant Secretary may appoint Attorneys-in-Fact and Agents to act for and on behalf of the Company and may give such appointee such authority as his or her certificate of authority may prescribe to sign with the Company's name and seal with the Company's seal bonds, recognizances, contracts of indemnity, and other writings obligatory in the nature of a bond, recognizance, or conditional undertaking, and any of said officers or the Board of Directors at any time may remove any such appointee and revoke the power given him or her; and it is

FURTHER RESOLVED, that the Chairman, the President, any Vice Chairman, any Executive Vice President, any Senior Vice President or any Vice President may delegate all or any part of the foregoing authority to one or more officers or employees of this Company, provided that each such delegation is in writing and a copy thereof is filed in the office of the Secretary; and it is

FURTHER RESOLVED, that any bond, recognizance, contract of indemnity, or writing obligatory in the nature of a bond, recognizance, or conditional undertaking shall be valid and binding upon the Company when (a) signed by the President, any Vice Chairman, any Executive Vice President, any Senior Vice President or any Vice President, any Second Vice President, the Treasurer, any Assistant Treasurer, the Corporate Secretary or any Assistant Secretary and duly attested and sealed with the Company's seal by a Secretary or Assistant Secretary; or (b) duly executed (under seal, if required) by one or more Attorneys-in-Fact and Agents pursuant to the power prescribed in his or her certificate or their certificates of authority or by one or more Company officers pursuant to a written delegation of authority; and it is

FURTHER RESOLVED, that the signature of each of the following officers: President, any Executive Vice President, any Senior Vice President, any Vice President; any Assistant Vice President, any Secretary, any Assistant Secretary, and the seal of the Company may be affixed by facsimile to any Power of Attorney or to any certificate relating thereto appointing Resident Vice Presidents, Resident Assistant Secretaries or Attorneys-in-Fact for purposes only of executing and attesting bonds and undertakings and other writings obligatory in the nature thereof, and any such Power of Attorney or certificate bearing such facsimile signature or facsimile seal shall be valid and binding upon the Company and any such power so executed and certified by such facsimile signature and facsimile seal shall be valid and binding on the Company in the future with respect to any bond or understanding to which it is attached.

I, Kevin E. Hughes, the undersigned, Assistant Secretary, of Farmington Casualty Company, Fidelity and Guaranty Insurance Company, Fidelity and Guaranty Insurance Underwriters, Inc., St. Paul Fire and Marine Insurance Company, St. Paul Guardian Insurance Company, St. Paul Mercury Insurance Company, Travelers Casualty and Surety Company, Travelers Casualty and Surety Company of America, and United States Fidelity and Guaranty Company 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 in full force and effect and has not been revoked.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seals of said Companies this 06 day of June, 2018.

Kevin E. Hughes, Assistant Secretary

To verify the authenticity of this Power of Attorney, call 1-800-421-3880 or contact us at www.travelersbond.com. Please refer to the above-named individuals and the details of the bond to which the power is attached.

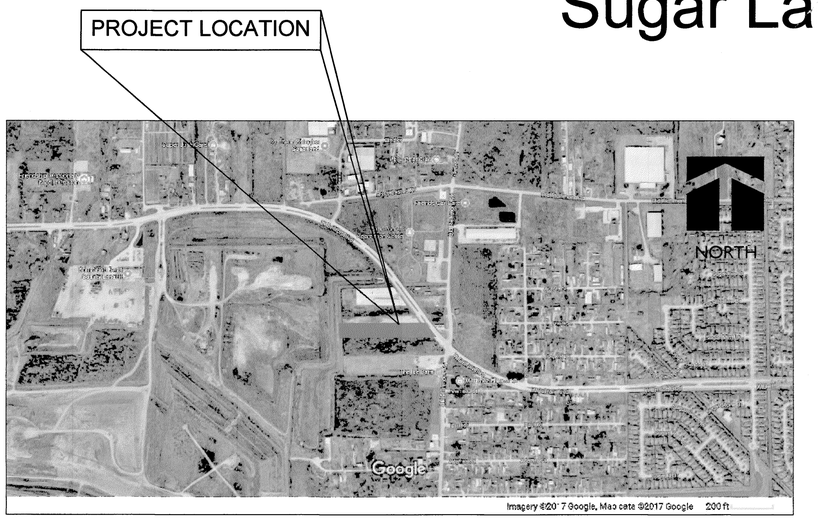
1 # PLAT NAME: WEST BELLFORT COMPLEX

CONSTRUCTION PLANS FOR PROPOSED:

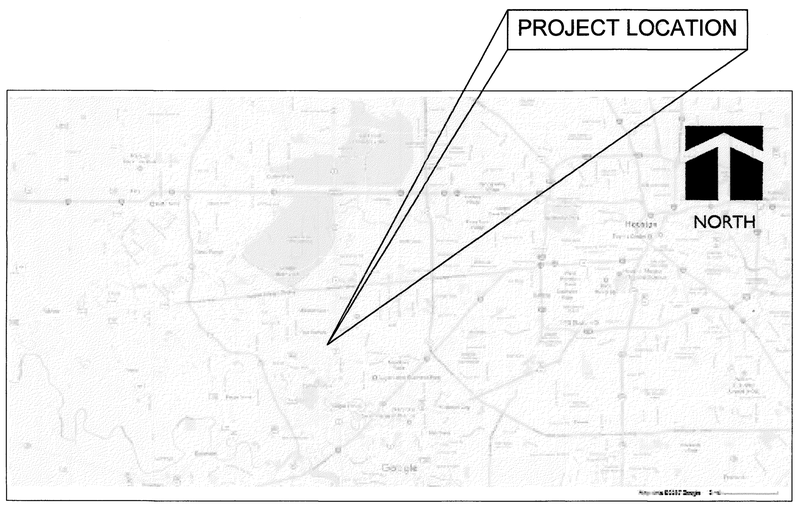
HAIDER ZAMAN WEST BELLFORT WAREHOUSE BUILDINGS

15545 West Bellfort

Sugar Land, Fort Bend County, TX 77498



LOCATION MAP



VICINITY MAP

ZIP CODE NO 77498
KEY MAP NO 497

SHEET INDEX

811 Know what's **below.** **Call** before you dig.

APP.		REVISIONS	DATE
3			
2			
1			

C.ENG

Tel: 281.584.0800
Fax: 281.584.0801
info@cengcon.com
www.cengcon.com
TX FIRM REGISTRATION #: F-9871

STATE OF TEXAS · CHADI AYOUB · 98170 · LICENSED PROFESSIONAL ENGINEER

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY CHADI AYOUB, P.E. 98170 ON 10/31/2017.

FORT BEND COUNTY ENGINEER

ENGINEER: Richard J. Stolleis, PE, PTOE
for Richard W. Stolleis, P.E.

DATE: 4/13/18

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

APPROVED: Casandra Matthews
for Development Coordinator

DATE: 4-13-2018

TYPICAL ABBREVIATIONS

ALL ABBREVIATIONS SHOWN ARE NOT NECESSARILY USED

A		L	
ABOVE FINISH FLOOR	- AFF	LIGHTWEIGHT CONCRETE	- LWT. CONC.
ADDITIONAL	- ADDN'L	LIVE LOAD	- LL
ADJACENT	- ADJ.	LONGITUDINAL	- LONG
AGGREGATE	- AGGR.	LONG LEG HORIZONTAL	- LLH
ALTERNATE	- ALT.	LONG LEG VERTICAL	- LLV
ANCHOR BOLT	- A.B.	LOW POINT	- L.P.
AND	- &		
ANGLE	- L	M	
ANTHONY POWER BEAM	- APB	MANUFACTURE(R)	- MFR.
ANTHONY POWER COLUMN	- APC	MASONRY OPENING	- M.O.
APPROVED	- APPD.	MATERIAL	- MAT.
APPROXIMATE	- APPROX.	MAXIMUM	- MAX.
ARCHITECT	- ARCH.	MECHANICAL	- MECH.
ARCHITECTURAL	- ARCH'L	MEZZANINE	- MEZZ.
ARCHITECTURAL FINISH SURFACE	- A.F.S.	MIDDLE	- MID.
AT	- @	MINIMUM	- MIN.
AIR CONDITIONER	- A/C	MISCELLANEOUS	- MISC.
AIR HANDLING UNIT	- AHU	MOMENT	- M
		MOMENT CONNECTION(S)	- M.C.
B			
BACK FACE	- B.F.	N	
BACK TO BACK	- B. TO B.	NEAR FACE	- N.F.
BASEMENT	- BSMT.	NOMINAL	- NOM.
BEAM	- BM.	NON-SHRINK	- N.S.
BEARING	- BRG.	NOT IN CONTRACT	- N.I.C.
BELOW FINISH FLOOR	- BFF	NOT TO SCALE	- N.T.S.
BETWEEN	- BTWN.	NUMBER	- NO. OR #
BEVEL (ED)	- BEV ('D)		
BLOCK	- BLK	O	
BLOCKING	- BLKG.	ON CENTER	- O.C.
BLOCK-OUT	- B.O.	OPENINGS	- OPNG(S).
BOTTOM	- BOT.	OPPOSITE	- OPP.
BRACKET	- BRKT.	OPPOSITE HAND	- O.H.
BRICK LEDGE ELEVATION	- B.L.E.	OUTSIDE FACE	- O.F.
BRIDGING	- BRDG.	OUTSIDE DIAMETER	- O.D.
BUILDING	- BLDG.	OUTSTANDING	- OSTG.
BUILDING LINE	- B.L.		
		P	
C		PAN	- P
CANTILEVER	- CANT.	PARALLEL	- PAR.
CAST IRON	- C.I.	PARTITION	- PARTN.
CAST-IN-PLACE	- C.I.P.	PENETRATION	- PEN.
CEILING	- CLG.	PERPENDICULAR	- PERP.
CENTER LINE	- C.L.	PIECE	- PC.
CENTER OF GRAVITY	- C.G.	PLATE	- PL.
CENTER TO CENTER	- C. TO C.	POINT	- PT.
CHANNEL	- C	POUNDS PER SQUARE FOOT	- P.S.F.
CLEAR OR CLEARANCE	- CLR.	POUNDS PER SQUARE INCH	- P.S.I.
COLUMN	- COL.	PRECAST CONCRETE	- P/C
COMPRESSION	- COMP.	PRE-ENGINEERED	
CONCRETE	- CONC.	BUILDING MANUFACTURER	- PEBM
CONCRETE MASONRY UNIT	- CMU	PRE-ENGINEERED	
CONNECTION (S)	- CONN(S).	METAL BUILDING	- PEMB
CONTINUOUS	- CONT.	PREFABRICATED	- PREFAB.
CONTRACTOR	- CONTR.	PRELIMINARY	- PRELIM.
CONTROL JOINT	- CT.J.	PROJECTION	- PROJ.
CONSTRUCTION	- CONST.		
CONSTRUCTION JOINT	- C.J.	R	
CORNER	- COR.	RADIUS	- R
COVER PLATE	- COV. PL.	REINFORCED CONCRETE PIPE	- RCP
		REINFORCE(ING) (ED) (MENT)	- REINF.
D		REMAINDER	- REM. OR R
DETAIL	- DET.	REQUIRE	- REQ.
DEAD LOAD	- DL	REQUIRED	- REQ'D.
DEFORMED BAR ANCHOR	- D.B.A.	RETENTION SYSTEM	- RET. SYS.
DESIGNED BY OTHERS	- DBO	RISER	- RIS.
DIAGONAL	- DIAG.	ROOF	- RF.
DIAMETER	- DIA. OR Ø	ROOF DRAIN	- R.D.
DIMENSION(S)	- DIM(S).	ROOF OPENING	- RF. OPNG.
DOVETAIL	- DVTL.	ROOM	- RM.
DOWNSPOUT	- DS.	ROUND	- RND.
DRAWING(S)	- DWG(S).		
DROP BEAM	- DB.	S	
DOUBLE	- DBL.	SCHEDULE(D)	- SCH.
DOWEL(S)	- DWL(S).	SECTION	- SECT.
		SHEAR	- V
E		SHEET	- SHT.
EACH	- EA.	SIDEWALK	- SW.
EACH FACE	- E.F.	SIMILAR	- SIM.
EACH WAY	- E.W.	SPACE	- SP.
EDGE ANGLE OFFSET	- E.A.O.	SPECIFICATION(S)	- SPEC(S).
ELECTRICAL	- ELEC.	SPECIFIED	- SPEC'D.
ELEVATION	- EL.	SQUARE FOOT (FEET)	- S.F.
ELEVATOR	- ELEV.	STANDARD	- STL.
ENGINEER	- ENGR.	STIFFENER	- STIFF.
ENTRANCE	- ENT.	STRAIGHT	- STR.
EQUAL	- EQ.	STIRRUPS	- STIRR.
EQUIPMENT	- EQUIP.	STRUCTURE	- STRUCT.
EXPANSION	- EXP.	STRUCTURAL	- STRUCT'L.
EXPANSION JOINT	- E.J.	SYMMETRICAL	- SYM.
EXISTING	- EXIST.	SUBCONTRACTOR	- SUBCONTR.
EXTERIOR	- EXT.	SUPPORT(S)	- SUPT(S).
EXTRA STRONG	- X-STR.		
		T	
F		TAPERED BEAM	- T.B.
FACE TO FACE	- F. TO F.	TEMPERATURE	- TEMP.
FABRICATOR	- FABR.	TENSION	- T
FAR SIDE	- F.S.	TERRAZO	- TERR.
FIELD VERIFY	- (F.V.)	THICK	- THK.
FINISH(ED)	- FIN.	TONGUE & GROOVE	- T & G
FINISHED FLOOR	- FIN. FL.	TOP & BOTTOM	- T & B
FIREPROOFING	- FP.	TOP OF	- T.O.
FLANGE	- FLG.	TOP OF BEAM	- T.O.B.
FLOOR	- FLR.	TOP OF FOOTING	- T.O.F.
FLOOR DRAIN	- F.D.	TOP OF PIER	- T.O.P.
FOUNDATION	- FDN.	TOP OF PIER CAP	- T.O.P.C.
FLUSH BEAM	- F.B.	TOP OF RETAINING WALL	- T.R.W.
		TOP OF STEEL	- T.O.S.
G		TOP OF STRUCTURAL CONCRETE	- T.O.S.C.
GAGE OR GAUGE	- GA.	TOP OF WALL	- T.O.W.
GALVANIZED	- GALV.	TREAD	- TR.
GALVANIZED IRON	- G.I.	TRIPLE	- TPL.
GALVANIZED STEEL	- G.S.	TRUSSES BY OTHERS	- TBO
GENERAL CONTRACTOR	- G.C.	TUBE STEEL	- TS
GOVERNMENT	- GOVT.	TYPICAL	- TYP.
GRADE	- GR.		
GRADE BEAM	- GR. BM.	U	
		UNLESS NOTED OTHERWISE	- U.N.O.
H		UNDER WALL ABOVE	- UWA
HEADED STUD	- H.S.	UNDER POINT LOAD	- UPL
HEIGHT	- HT.		
HIGH POINT	- H.P.	V	
HOLLOW STRUCTURAL SHAPE	- HSS	VERTICAL	- VERT.
HORIZONTAL	- HORIZ.		
HOOK	- HK.	W	
		WATERSTOP	- WS.
I		WATERPROOFING	- WPFG.
INFORMATION	- INFO.	WELDED WIRE MESH	- W.W.M.
INSIDE DIAMETER	- I.D.	WIND BRACE	- WB
INSIDE FACE	- I.F.	WIND LOAD	- W.L.
INTERIOR	- INT.	WINDOW	- WDW.
INTERMEDIATE	- INTERM.	WITH	- W/
		WORK POINT	- W.P.
J		WOOD	- WD.
JOINT(S)	- JT(S).	WROUGHT IRON	- W.I.
JOIST(S)	- JST(S).		
K			
KIPS	- K		
KIP PER LINEAR FOOT	- KLF		
KIP PER SQUARE FOOT	- KSF		

TYPICAL DETAIL SHEETS:

THE DETAILS IN THE DRAWINGS, INCLUDING THOSE DRAWINGS REFERENCED BY THIS INDEX, WHICH ARE DESIGNATED AS "TYPICAL DETAILS", APPLY GENERALLY TO THE CONSTRUCTION IN ALL AREAS WHERE THE CONDITIONS ARE SIMILAR TO THOSE DESCRIBED IN THE DETAILS, REGARDLESS OF WHETHER OR NOT THE DETAILS ARE SPECIFICALLY REFERENCED IN THE DRAWINGS.

MISCELLANEOUS

1. THE CONTRACT DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURES, AND EXCEPT WHERE SPECIFICALLY SHOWN, DO NOT INDICATE THE METHOD OR MEANS OF CONSTRUCTION. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, PROCEDURES, TECHNIQUES, AND SEQUENCE.
2. THE STRUCTURE HAS BEEN DESIGNED TO RESIST DESIGN LOADS ONLY AS A COMPLETE STRUCTURE. APPLICATIONS OF CONSTRUCTION LOADS TO THE PARTIALLY COMPLETED STRUCTURE SHALL BE CONSIDERED BY THE CONTRACTOR AND SO INCLUDED IN THE DESIGN OF SHORING, BRACING, FORMWORK, AND ANY OTHER SUPPORTING ELEMENTS PROVIDED FOR CONSTRUCTION OF THE STRUCTURE. DURING ERECTION AND UNTIL ALL PERMANENT CONNECTIONS ARE MADE, THE CONTRACTOR MUST PROVIDE TEMPORARY BRACING TO BRACE THE STRUCTURE IN ALL DIRECTIONS.
3. THE ENGINEER SHALL NOT HAVE CONTROL OR CHARGE OF, AND SHALL NOT BE RESPONSIBLE FOR, CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, OR PROCEDURES FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK, FOR THE ACTS OR OMISSION OF THE CONTRACTOR, SUBCONTRACTOR, OR ANY OTHER PERSONS PERFORMING ANY OF THE WORK, OR FOR THE FAILURE OF ANY OF THEM TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
4. GENERAL CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS, GRADE CONDITIONS, (BOTH NEW AND EXISTING) REPORTING ANY DISCREPANCIES TO THE ENGINEER BEFORE PROCEEDING WITH ANY PHASE OF THE WORK AS HE WILL BE RESPONSIBLE FOR ALL WORK FITTING AS INTENDED BY THE DRAWINGS AND SPECIFICATIONS.
5. THE CONTRACTOR SHALL COMPARE ALL SECTIONS AND REPORT ANY DISCREPANCY TO THE ENGINEER ON RECORD PRIOR TO FABRICATION OR INSTALLING STRUCTURAL MEMBERS.
6. CHANGES SHALL NOT BE MADE TO THE DRAWINGS WITHOUT WRITTEN APPROVAL OF THE ENGINEER.

SITE PREPARATION

1. ENGINEER ON RECORD IS NOT RESPONSIBLE FOR SETTLEMENTS OR SWELL OF THE FOUNDATIONS DUE TO SOIL CONDITIONS. OWNER IS REQUESTED TO HIRE AN INDEPENDENT SOIL TESTING AGENCY TO VERIFY ADEQUACY AND SUITABILITY OF SOIL CONDITIONS.

FOUNDATION NOTES:

CONTRACTOR SHALL REVIEW AND BECOME THOROUGHLY FAMILIAR WITH THE CONTENTS OF THE REFERENCED SOIL REPORT.

5. SOIL DESIGN PARAMETERS:
   - ø', EFFECTIVE FRACTION ANGLE = 30
   - SANDY CLAY SOIL
   - ACTIVE PRESSURE DRAINED CONDITION = 68 PSF/FT

IF ANY OF THE SOIL PARAMETERS, OR INFORMATION MENTIONED IN THIS DOCUMENT DOES NOT MATCH EXISTING CONDITIONS, CONTRACTOR SHALL STOP WORK IMMEDIATELY AND INFORM THE ENGINEER ON RECORD.

FOUNDATION PREPARATION:

1. FOLLOWING THE EXCAVATION, THE FOUNDATION SOIL SHALL BE EXAMINED BY THE OWNER'S GEOTECHNICAL ENGINEER TO ASSURE ACTUAL FOUNDATION SOIL STRENGTH MEETS OR EXCEEDS THE ASSUMED DESIGN BEARING STRENGTH.
2. SOILS NOT MEETING THE REQUIRED STRENGTH SHALL BE REMOVED AND REPLACED WITH INFILL SOILS, AS DIRECTED BY THE OWNER'S GEOTECHNICAL ENGINEER.
3. FOUNDATION SOIL SHALL BE PROOF-ROLLED AND COMPACTED TO 95% STANDARD PROCTOR DENSITY AND INSPECTED BY THE OWNER'S GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT OF LEVELING PAD MATERIALS.

LEVELING PAD CONSTRUCTION:

1. LEVELING PAD SHALL HAVE A MINIMUM THICKNESS OF 6 INCHES.
2. THE LEVELING PAD SHOULD EXTEND LATERALLY AT LEAST A DISTANCE OF 6 INCHES FROM THE TOE AND HEEL OF THE LOWERMOST SRW UNIT.
3. GRANULAR LEVELING PAD MATERIAL SHALL BE COMPACTED TO PROVIDE A FIRM, LEVEL BEARING SURFACE ON WHICH TO PLACE THE FIRST COURSE OF UNITS.
4. WELL-GRADED SAND CAN BE USED TO SMOOTH THE TOP 1/4 INCH TO 1/2 INCH OF THE LEVELING PAD. COMPACTION WILL BE WITH MECHANICAL PLATE COMPACTORS TO ACHIEVE 95% OF MAXIMUM STANDARD PROCTOR DENSITY (ASTM D 698).
5. MATERIAL FOR LEVELING PAD SHALL CONSIST OF COMPACTED SAND, GRAVEL, OR COMBINATION THEREOF (USCS SOIL TYPES GP, GW, SP AND SW) AND SHALL BE A MINIMUM OF 6 INCHES IN DEPTH.

EXCAVATION:

1. CONTRACTOR SHALL EXCAVATE TO THE LINES AND GRADES SHOWN ON THE PROJECT GRADING PLANS.
2. CONTRACTOR SHALL TAKE PRECAUTIONS TO MINIMIZE OVER-EXCAVATION. OVER-EXCAVATION SHALL BE FILLED WITH COMPACTED INFILL MATERIAL, OR AS DIRECTED BY THE ENGINEER ON RECORD, AT THE CONTRACTOR'S EXPENSE.
3. CONTRACTOR SHALL VERIFY LOCATION OF EXISTING STRUCTURES AND UTILITIES PRIOR TO EXCAVATION. CONTRACTOR SHALL ENSURE ALL SURROUNDING STRUCTURES ARE PROTECTED FROM THE EFFECTS OF WALL EXCAVATION. EXCAVATION SUPPORT, IF REQUIRED, IS THE RESPONSIBILITY OF THE CONTRACTOR.

CONSTRUCTION ADJACENT TO COMPLETED WALL:

1. THE OWNER OR OWNER'S REPRESENTATIVE IS RESPONSIBLE FOR ENSURING THAT CONSTRUCTION BY OTHERS ADJACENT TO THE WALL DOES NOT DISTURB THE WALL OR PLACE TEMPORARY CONSTRUCTION LOADS ON THE WALL THAT EXCEED DESIGN LOADS, INCLUDING LOADS SUCH AS WATER PRESSURE, TEMPORARY GRADES, OR EQUIPMENT LOADING. HEAVY PAVING OR GRADING EQUIPMENT SHALL BE KEPT A MINIMUM OF 3 FEET BEHIND THE BACK OF THE WALL FACE. EQUIPMENT WITH WHEEL LOADS IN EXCESS OF 150 PSF LIVE LOAD SHALL NOT BE OPERATED WITHIN 10 FEET OF THE FACE OF THE RETAINING WALL DURING CONSTRUCTION ADJACENT TO THE WALL. CARE SHOULD BE TAKEN BY THE GENERAL CONTRACTOR TO ENSURE WATER RUNOFF IS DIRECTED AWAY FROM THE WALL STRUCTURE UNTIL FINAL GRADING AND SURFACE DRAINAGE COLLECTION SYSTEMS ARE COMPLETED.

SRW CAPS:

1. SRW CAPS SHALL BE PROPERLY ALIGNED AND GLUED TO UNDERLYING UNITS WITH VERSA-LOK ADHESIVE, A FLEXIBLE, HIGH-STRENGTH CONCRETE ADHESIVE. RIGID ADHESIVE OR MORTAR ARE NOT ACCEPTABLE.
2. CAPS SHALL OVERHANG THE TOP COURSE OF UNITS BY 3/4" TO 1". SLIGHT VARIATION IN OVERHANG IS ALLOWED TO CORRECT ALIGNMENT AT THE TOP OF THE WALL.

DRAINAGE AGGREGATE AND DRAINAGE MATERIAL PLACEMENT:

1. DRAINAGE AGGREGATE SHALL BE ANGULAR, CLEAN STONE OR GRANULAR FILL MEETING THE FOLLOWING GRADATION AS DETERMINED IN ACCORDANCE WITH ASTM D 422:

SIEVE SIZE	% PASSING
1"	100
¾"	75-100
# 4	0-60
# 40	0-50
# 200	0-5

2. DRAINAGE AGGREGATE SHALL BE INSTALLED TO THE LINE, GRADES AND SECTIONS SHOWN ON THE RETAINING WALL PLANS. DRAINAGE AGGREGATE SHALL BE PLACED TO THE MINIMUM THICKNESS SHOWN ON THE CONSTRUCTION PLANS BETWEEN AND BEHIND UNITS (A MINIMUM OF 1 CUBIC FOOT FOR EACH EXPOSED SQUARE FOOT OF WALL FACE UNLESS OTHERWISE NOTED).
3. DRAINAGE COLLECTION PIPES SHALL BE INSTALLED TO MAINTAIN GRAVITY FLOW OF WATER OUTSIDE THE REINFORCED-SOIL ZONE. THE DRAINAGE COLLECTION PIPE SHALL BE INSTALLED AT THE LOCATIONS SHOWN ON THE FINAL CONSTRUCTION DRAWINGS. THE DRAINAGE COLLECTION PIPE SHALL DAYLIGHT INTO A STORM SEWER OR ALONG A SLOPE, AT AN ELEVATION BELOW THE LOWEST POINT OF THE PIPE WITHIN THE AGGREGATE DRAIN.

SEGMENTAL RETAINING WALL (SRW) UNIT INSTALLATION:

1. ALL SRW UNITS SHALL BE INSTALLED AT THE PROPER ELEVATION AND ORIENTATION AS SHOWN ON THE PLANS AND DETAILS.
2. THE SRW UNITS SHALL BE INSTALLED IN GENERAL ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. THE SPECIFICATIONS AND DRAWINGS SHALL GOVERN IN ANY CONFLICT BETWEEN THE TWO REQUIREMENTS.
3. FIRST COURSE OF SRW UNITS SHALL BE PLACED ON THE LEVELING PAD. THE UNITS SHALL BE LEVELED SIDE-TO-SIDE, FRONT-TO-REAR AND WITH ADJACENT UNITS, AND ALIGNED TO ENSURE INTIMATE CONTACT WITH THE LEVELING PAD. THE FIRST COURSE IS THE MOST IMPORTANT TO ENSURE ACCURATE AND ACCEPTABLE RESULTS. NO GAPS SHALL BE LEFT BETWEEN THE FRONT OF ADJACENT UNITS. ALIGNMENT MAY BE DONE BY MEANS OF A STRING LINE OR OFFSET FROM BASE LINE TO THE BACK OF THE UNITS.
4. ALL EXCESS DEBRIS SHALL BE CLEANED FROM TOP OF UNITS AND THE NEXT COURSE OF UNITS INSTALLED ON TOP OF THE UNITS BELOW.
5. TWO VERSA-TUFF CONNECTION PINS SHALL BE INSERTED THROUGH THE PIN HOLES OF EACH UPPER-COURSE UNIT INTO RECEIVING SLOTS IN LOWER-COURSE UNITS. PINS SHALL BE FULLY SEATED IN THE PIN SLOT BELOW. UNITS SHALL BE PUSHED FORWARD TO REMOVE ANY LOOSENESS IN THE UNIT-TO-UNIT CONNECTION.
6. PRIOR TO PLACEMENT OF NEXT COURSE, THE LEVEL AND ALIGNMENT OF THE UNITS SHALL BE CHECKED AND CORRECTED WHERE NEEDED. LAYOUT OF CURVES AND CORNERS SHALL BE INSTALLED IN ACCORDANCE WITH SRW MANUFACTURER'S INSTALLATION GUIDELINES. WALLS MEETING AT CORNERS SHALL BE INTERLOCKED BY OVERLAPPING SUCCESSIVE COURSES.
7. PROCEDURES "3" THROUGH "6" SHALL BE REPEATED UNTIL REACHING TOP OF WALL UNITS, JUST BELOW THE HEIGHT OF THE CAP UNITS. GEOSYNTHETIC REINFORCEMENT, DRAINAGE MATERIALS, AND REINFORCED BACKFILL SHALL BE PLACED IN SEQUENCE WITH UNIT INSTALLATION AS DESCRIBED IN GENERAL NOTES.

GEOSYNTHETIC REINFORCEMENT PLACEMENT:

1. ALL GEOSYNTHETIC REINFORCEMENT SHALL BE INSTALLED AT THE PROPER ELEVATION AND ORIENTATION AS SHOWN ON THE RETAINING WALL DETAILS.
2. AT THE ELEVATIONS SHOWN ON THE FINAL PLANS, (AFTER THE UNITS, DRAINAGE MATERIAL AND BACKFILL HAVE BEEN PLACED TO THIS ELEVATION) THE GEOSYNTHETIC REINFORCEMENT SHALL BE LAID HORIZONTALLY ON COMPACTED INFILL AND ON TOP OF THE CONCRETE SRW UNITS, TO WITHIN 1 INCH OF THE FRONT FACE OF THE UNIT BELOW. EMBEDMENT OF THE GEOSYNTHETIC IN THE SRW UNITS SHALL BE CONSISTENT WITH SRW MANUFACTURER'S RECOMMENDATIONS. CORRECT ORIENTATION OF THE GEOSYNTHETIC REINFORCEMENT SHALL BE VERIFIED BY THE CONTRACTOR TO BE IN ACCORDANCE WITH THE GEOSYNTHETIC MANUFACTURER'S RECOMMENDATIONS. THE HIGHEST-STRENGTH DIRECTION OF THE GEOSYNTHETIC MUST BE PERPENDICULAR TO THE WALL FACE.
3. GEOSYNTHETIC REINFORCEMENT LAYERS SHALL BE ONE CONTINUOUS PIECE FOR THEIR ENTIRE EMBEDMENT LENGTH. SPLICING OF THE GEOSYNTHETIC IN THE DESIGN-STRENGTH DIRECTION (PERPENDICULAR TO THE WALL FACE) SHALL NOT BE PERMITTED. ALONG THE LENGTH OF THE WALL, HORIZONTALLY ADJACENT SECTIONS OF GEOSYNTHETIC REINFORCEMENT SHALL BE BUTTED IN A MANNER TO ASSURE 100% COVERAGE PARALLEL TO THE WALL FACE.
4. TRACKED CONSTRUCTION EQUIPMENT SHALL NOT BE OPERATED DIRECTLY ON THE GEOSYNTHETIC REINFORCEMENT. A MINIMUM OF 6 INCHES OF BACKFILL IS REQUIRED PRIOR TO OPERATION OF TRACKED VEHICLES OVER THE GEOSYNTHETIC. TURNING SHOULD BE KEPT TO A MINIMUM. RUBBER-TIRED EQUIPMENT MAY PASS OVER THE GEOSYNTHETIC REINFORCEMENT AT SLOW SPEEDS (LESS THAN 5 MPH).
5. THE GEOSYNTHETIC REINFORCEMENT SHALL BE FREE OF WRINKLES PRIOR TO PLACEMENT OF SOIL FILL. THE NOMINAL TENSION SHALL BE APPLIED TO THE REINFORCEMENT AND SECURED IN PLACE WITH STAPLES, STAKES OR BY HAND TENSIONING UNTIL REINFORCEMENT IS COVERED BY 6 INCHES OF FILL.

BACKFILL PLACEMENT:

1. THE REINFORCED BACKFILL SHALL BE PLACED AS SHOWN IN THE FINAL WALL PLANS IN THE MAXIMUM COMPACTED LIFT THICKNESS OF 8" AND SHALL BE COMPACTED TO A MINIMUM OF 95% OF STANDARD PROCTOR DENSITY (ASTM D 698) AT A MOISTURE CONTENT WITHIN -1% POINT TO +3% POINTS OF OPTIMUM. THE BACKFILL SHALL BE PLACED AND SPREAD IN SUCH A MANNER AS TO ELIMINATE WRINKLES OR MOVEMENT OF THE GEOSYNTHETIC REINFORCEMENT AND THE SRW UNITS.
2. ONLY HAND-OPERATED COMPACTION EQUIPMENT SHALL BE ALLOWED WITHIN 3 FEET OF THE BACK OF THE WALL UNITS. COMPACTION WITHIN THE 3 FEET BEHIND THE WALL UNITS SHALL BE ACHIEVED BY AT LEAST THREE PASSES OF A LIGHTWEIGHT MECHANICAL TAMPER, PLATE, OR ROLLER.
3. AT THE END OF EACH DAY'S OPERATION, THE CONTRACTOR SHALL SLOPE THE LAST LEVEL OF BACKFILL AWAY FROM THE WALL FACING AND REINFORCED BACKFILL TO DIRECT WATER RUNOFF AWAY FROM THE WALL FACE.
4. AT COMPLETION OF WALL CONSTRUCTION, BACKFILL SHALL BE PLACED LEVEL WITH FINAL TOP OF WALL ELEVATION. IF FINAL GRADING, PAVING, LANDSCAPING AND/OR STORM DRAINAGE INSTALLATION ADJACENT TO THE WALL IS NOT PLACED IMMEDIATELY AFTER WALL COMPLETION, TEMPORARY GRADING AND DRAINAGE SHALL BE PROVIDED TO ENSURE WATER RUNOFF IS NOT DIRECTED AT THE WALL NOR ALLOWED TO COLLECT OR POND BEHIND THE WALL UNTIL FINAL CONSTRUCTION ADJACENT TO THE WALL IS COMPLETED.

SEGMENTAL RETAINING WALL UNITS:

1. SRW UNITS SHALL BE MACHINE-FORMED, PORTLAND CEMENT CONCRETE BLOCKS SPECIFICALLY DESIGNED FOR RETAINING WALL APPLICATIONS. SRW UNITS CURRENTLY APPROVED FOR THIS PROJECT ARE: VERSA-LOK " STANDARD" RETAINING WALL UNITS AS MANUFACTURED BY VERSA-LOK RETAINING WALL SYSTEMS (WWW.VERSA-LOK.COM) WITH THE FOLLOWING SPECIFICATIONS:

WIDTH (FACE):	16" (406.4MM)
WIDTH (REAR):	14" (355.6MM)
HEIGHT:	6" (152.4MM)
DEPTH:	12" (304.8MM)
FACE AREA:	0.667 FT² (0.062M2)
WEIGHT:	82 LBS (37.19KG)
WEIGHT / FACE AREA:	123LBS/FT² (600KG/M2)
SETBACK:	3/4" PER UNIT
BATTER/CANT:	7.13°
# VERSA-TUFF PINS:	2 PER UNIT
MINIMUM RADIUS:	8 FT

2. COLOR OF SRW UNITS SHALL BE AS PER OWNER.
3. FINISH OF SRW UNITS SHALL BE SPLIT-FACE.
4. SRW UNIT FACES SHALL BE OF STRAIGHT GEOMETRY.
5. SRW UNIT HEIGHT SHALL BE 6 INCHES.
6. SRW UNITS SHALL PROVIDE A MINIMUM WEIGHT OF 120 PSF WALL FACE AREA.
7. SRW UNITS SHALL BE SOLID THROUGH THE FULL DEPTH OF THE UNIT.
8. SRW UNITS SHALL HAVE A DEPTH (FRONT FACE TO REAR) TO HEIGHT RATIO OF 2:1, MINIMUM.
9. SRW UNITS SHALL BE CAPABLE OF BEING ERECTED WITH THE HORIZONTAL GAP BETWEEN ADJACENT UNITS NOT EXCEEDING 1/8 INCH.
10. SRW UNITS SHALL BE INTERLOCKED WITH CONNECTING PINS THAT PROVIDE 3/4" SETBACK FROM UNIT BELOW (YIELDING A 7-DEGREE CANT FROM VERTICAL).
11. SRW UNITS SHALL BE SOUND AND FREE OF CRACKS OR OTHER DEFECTS THAT WOULD INTERFERE WITH THE PROPER PLACING OF THE UNIT OR SIGNIFICANTLY IMPAIR THE STRENGTH OR PERMANENCE OF THE STRUCTURE. ANY CRACKS OR CHIPS OBSERVED DURING CONSTRUCTION SHALL FALL WITHIN THE GUIDELINES OUTLINED IN ASTM C 1372.
12. CONCRETE SRW UNITS SHALL CONFORM TO THE REQUIREMENTS OF ASTM C 1372 AND HAVE A MINIMUM NET AVERAGE 28 DAYS COMPRESSIVE STRENGTH OF 3000 PSI. COMPRESSIVE STRENGTH TEST SPECIMENS SHALL CONFORM TO THE SAW-CUT COUPON PROVISIONS OF ASTM C 140. M. SRW UNITS' MOLDED DIMENSIONS SHALL NOT DIFFER MORE THAN + 1/8 INCH FROM THAT SPECIFIED, AS MEASURED IN ACCORDANCE WITH ASTM C 140. THIS TOLERANCE DOES NOT APPLY TO ARCHITECTURAL SURFACES, SUCH AS SPLIT FACES.

GENERAL CONSTRUCTION NOTES:

1. CONSTRUCT WASTEWATER COLLECTION SYSTEMS, WATER LINES AND STORM DRAINAGE IN ACCORDANCE WITH THE LATEST EDITION OF THE PUBLICATIONS STANDARD CONSTRUCTION SPECIFICATIONS FOR WASTEWATER COLLECTION SYSTEMS, WATER LINES, STORM DRAINAGE, AND STREET PAVING AND STANDARD CONSTRUCTION DETAILS FOR WASTEWATER COLLECTION SYSTEMS, WATER LINES, STORM DRAINAGE, AND STREET PAVING PUBLISHED BY THE CITY OF HOUSTON, DEPARTMENT OF PUBLIC WORKS AND ENGINEERING.
2. UTILITIES PRESENTED ON THESE DRAWINGS ARE SHOWN BASED ON THE BEST AVAILABLE INFORMATION. CONTRACTOR SHALL VERIFY THE EXACT LOCATIONS IN THE FIELD PRIOR TO COMMENCING CONSTRUCTION. CONTRACTOR SHALL NOTIFY TEXAS ONE CALL AT 713-223-4567/811 OR 800-344-8377 AND LONE STAR NOTIFICATION CENTER AT 800-669-8344 AT LEAST 48 HOURS BEFORE PROCEEDING WITH ANY EXCAVATION.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGES TO EXISTING WATER, WASTEWATER AND STORM DRAINAGE LINES. DAMAGES SHALL BE REPAIRED IN ACCORDANCE WITH THE CITY OF HOUSTON, DEPARTMENT OF PUBLIC WORKS AND ENGINEERING'S STANDARD CONSTRUCTION SPECIFICATIONS FOR WASTEWATER COLLECTION SYSTEMS, WATER LINES, STORM DRAINAGE, AND STREET PAVING AND STANDARD CONSTRUCTION DETAILS FOR WASTEWATER COLLECTION SYSTEMS, WATER LINES, STORM DRAINAGE, AND STREET PAVING REFERENCED ABOVE, AT NO ADDITIONAL COST.
4. CONTRACTOR SHALL NOTIFY THE OFFICE OF THE CITY ENGINEER, DEPARTMENT OF PUBLIC WORKS AND ENGINEERING IN WRITING PRIOR TO COMMENCING CONSTRUCTION.
5. ADEQUATE DRAINAGE SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION AND ANY DRAINAGE DITCH OR STRUCTURE DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO EXISTING CONDITIONS OR BETTER.
6. CONTRACTOR SHALL COMPLY WITH LATEST EDITION OF OSHA REGULATIONS AND THE STATE OF TEXAS LAWS CONCERNING EXCAVATION.

DETENTION POND OWNERSHIP & MAINTENANCE NOTES:

PROVISIONS SHALL BE MADE BY THE OWNER TO ENSURE THAT THE DEVELOPMENT DETENTION FACILITY IS MAINTAINED.

CITY OF HOUSTON
FORM A
ACCESS MANAGEMENT
DATA SUMMARY

SITE INFORMATION:

15545 WEST BELLFORT BLVD, SUGAR LAND, TX
Street Address (Primary Access):

Legal Description (if no street address)

497 Key Map Page No. **77498** Zip Code

SUBJECT PROPERTY

The dimensions of the private property, and the type and location of improvements thereon or to be placed thereon:

Tract Size (Sq Ft or Acres): **1.978 ACRES**

Current Land Use (include # of units, square footage of improvements, etc.) **NONE - VACANT LAND**

Current Trip Generation Rates (Based on ITE Trip Generation Handbook or COH approved local rate)

ITE Land Use Classification: **VACANT/CLEAR** AM Trip Rate: **0** PM Trip Rate: **0**
(Code & Description)

AM Peak Hour Trips: **0** PM Peak Hour Trips: **0** Average DailyTraffic : **0**
(Provide Trip Generation supporting documentation as applicable.)

Proposed use to be made of the private property: (include proposed # of units, square footage of improvements, etc.) **(7) WAREHOUSING UNITS - 2,275 SQ FT EACH WITH A TOTAL OF 15,925 SQ FT OF ENCLOSED WAREHOUSE AREA.**

Proposed Trip Generation Rates (Based on ITE Trip Generation Handbook or COH approved local rate)

ITE Land Use Classification: **CODE: 150 WAREHOUSING** AM Trip Rate: **0.30** PM Trip Rate: **0.32**
(Code & Description)

AM Peak Hour Trips: **5** PM Peak Hour Trips: **5** Average Daily Traffic: **57**
(Provide Trip Generation supporting documentation as applicable)

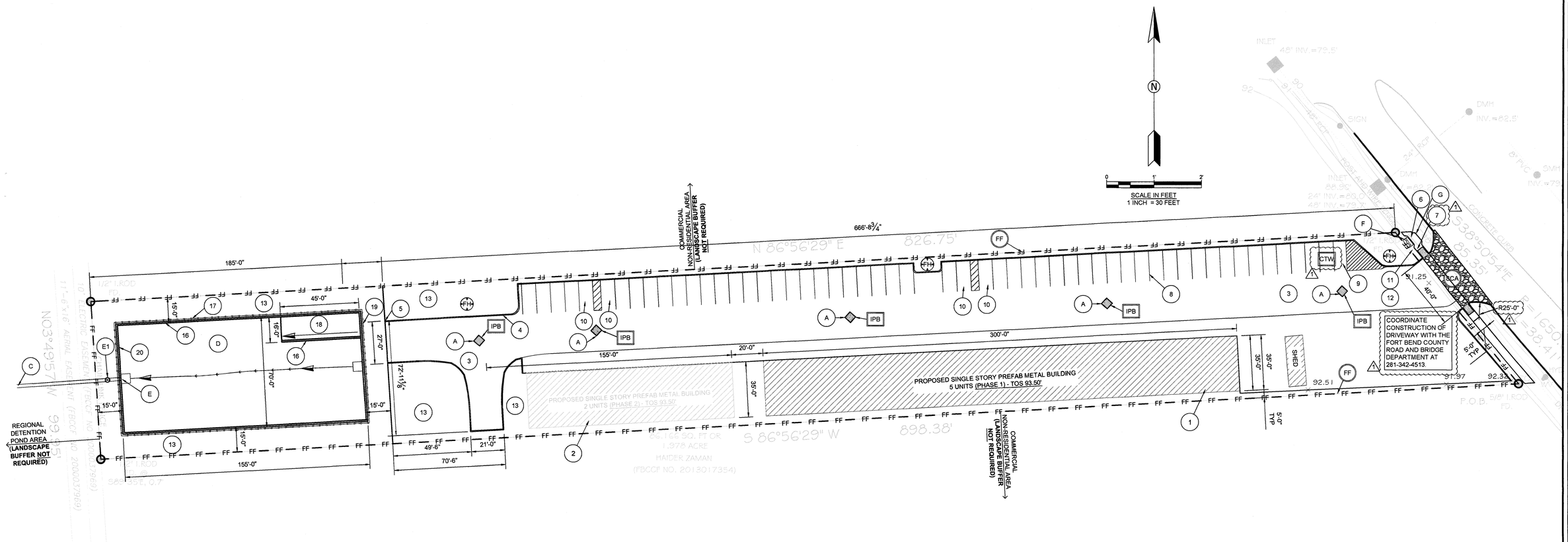
CALCULATIONS:
UNITS = 1000 SQ FT, TOTAL AREA=15,925 SQ FT, TOTAL UNITS=7000/1000=15.925
ITE 9TH ED GENERATION RATES: WEEKDAY=3.56, AM=0.30, PM=0.32
TOTAL GENERATED TRIPS:
DAILY=3.56X15.925=57, AM=0.30X15.925=5, PM=0.32X15.925=5

Fort Bend County Engineering
FORT BEND COUNTY, TEXAS

Richard W. Stolleis, P.E.
County Engineer

Fort Bend County
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



CITY OF HOUSTON
DEPARTMENT OF PLANNING & DEVELOPMENT

OFF-STREET PARKING REQUIREMENTS
(PLEASE ATTACH TO SITE PLAN)

A) PROPOSED LAND USE Class 4-b: Bulk warehouse

B) PREVIOUS LAND USE None - vacant

C) 1. GROSS FLOOR AREA OF PROPOSED DEVELOPMENT Building A & B = 15,925 sq ft total

2. NUMBER OF SEATS none

D)* NO. PARKING SPACES REQUIRED FOR THE PROPOSED DEVELOPMENT PER CHAPTER 26 CODE OF ORDINANCES office space:1338 sq ft (7 spl), warehouse:14496 sq ft (7 spl), TOTAL PARKING SPACES

E)* NO. OF PROPOSED PARKING SPACES ON-SITE 60 parking spaces provided > 14 required

F)* NO. OF PROPOSED PARKING SPACES OFF-STREET none (IF APPLICABLE)

DISTANCE (MEASURED ON A CLEARLY DELINEATED PEDESTRIAN PATH OR WALKWAY) TO OFF-SITE PARKING: not applicable

*** NOTE: IF ADDITIONAL PARKING IS REQUIRED E OR E + F MUST = D**

THE FOLLOWING INFORMATION MUST ALSO BE PROVIDED IF PARKING SPACES FOR AN EXISTING LAND USE ARE TO BE USED TO SATISFY THE PARKING REQUIREMENT.

EXISTING LAND USE none - vacant land

EXISTING GROSS FLOOR AREA none - vacant land

EXISTING PARKING SPACES: ON-SITE none OFF-SITE none

x Calculations:

A. STREET TREES:
Length of property line in lineal feet as measured along all sides of the property fronting on a public street(s).
123.72 lineal feet/30 = 3 Street trees required.
(*Staff may create an artificial lot*)

B. PARKING LOT TREES:
Number of new parking stalls to be constructed 60 /10 = 6 parking lot trees required.

C. TOTAL TREE REQUIREMENT:
A. + B. = 9 total number of street and parking lot trees required.

D. SHRUBS: (*Are required for new or the expanded portion of parking lots*)
Total number of Street trees required, from A above 9 x 10 = 90 shrubs.

**** LANDSCAPE BUFFER NOT REQUIRED. SEE SITE PLAN FOR BOUNDARY CONDITIONS. ****

E. LANDSCAPE BUFFER:
6' high screening fence, or 15' wide evergreen planting strip along the total length of property line adjacent to existing single-family residential, or limit of expansion adjacent to existing single-family residential.
(*Site plan must show land use on all side of the property*)

SWPPP CONSTRUCTION NOTES:

1. CONTRACTOR SHALL IMPLEMENT INLET PROTECTION DEVICES AND REINFORCED FILTER FABRIC BARRIER ALONG ROAD AND SIDE DITCHES AT LOCATIONS SHOWN ON THE TYPICAL STORM WATER POLLUTION PREVENTION (SWPP) PLANS TO KEEP SILT AND OR EXCAVATED MATERIALS FROM ENTERING INTO THE STORM WATER INLETS AND DITCHES EVENTUALLY POLLUTING THE RECEIVING STORM.
2. DURING THE EXCAVATION PHASE OF THE PROJECT, CONTRACTOR SHALL SCHEDULE THE WORK IN SHORT SEGMENTS SO THAT EXCAVATION MATERIAL CAN BE QUICKLY HAULED AWAY FROM THE SITE AND TO PREVENT IT FROM STAYING UNCOLLECTED ON THE EXISTING PAVEMENT. ANY LOOSE EXCAVATED MATERIAL WHICH FALLS ON PAVEMENTS OR DRIVEWAYS SHALL BE SWEPT BACK INTO THE EXCAVATED AREA.
3. CONTRACTOR SHALL CLEAN UP THE EXISTING STREET INTERSECTIONS AND DRIVEWAYS DAILY, AS NECESSARY, TO REMOVE ANY EXCESS MUD, SILT OR ROCK TRACKED FORM THE EXCAVATED AREA.
4. CONTRACTOR SHALL FOLLOW GOOD HOUSEKEEPING PRACTICES DURING THE CONSTRUCTION OF THE PROJECT, ALWAYS CLEANING UP DIRT AND LOOSE MATERIAL AS CONSTRUCTION PROGRESSES.
5. CONTRACTOR TO INSPECT AND MAINTAIN THE AREAS LISTED BELOW AT LEAST ONCE EVERY FOURTEEN(14) CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A STORM EVENT OF 0.5 INCHES OR GREATER.
   - 5.1. DISTURBED AREAS OF THE CONSTRUCTION SITE THAT HAVE NOT BEEN FINALLY STABILIZED.
   - 5.2. AREAS USED FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION.
   - 5.3. STRUCTURAL CONTROL MEASURES.
   - 5.4. LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE.
6. CONTRACTOR TO BE RESPONSIBLE TO MAINTAIN EXISTING DITCHES AND OR CULVERTS FOR UNOBSTRUCTED DRAINAGE AT ALL TIMES. WHERE SODDING IS DISTURBED BY EXCAVATION ON BACKFILLING OPERATIONS, SUCH AREAS SHALL BE REPLACED BY SEEDING OR SODDING. SLOPES 4:1 OR STEEPER SHALL BE REPLACED BY BLOCK SODDING.

FIRE NOTES:

1. CURBS LOCATED BETWEEN APPROVED FIRE LANE-TOW-AWAY ZONE SIGNS SHALL BE PAINTED RED OR A RED STRIPE SHALL BE PLACED ALONG THE PAVEMENT WHERE THERE IS NO CURB. THESE CURBS SHALL ALSO BE CONSPICUOUSLY AND LEGIBLY MARKED WITH THE WARNING "FIRE LANE-TOW-AWAY ZONE" IN WHITE LETTERS AT LEAST 3" IN HEIGHT, AT INTERVALS NOT EXCEEDING 50'.
2. ANY COLOR OTHER THAN RED MAY BE USED IN "NO PARKING" DESIGNATED AREAS THAT ARE NOT APPROVED FIRE LANES. RED COLORED CURBS; PAVEMENT STRIPPING OR WHEEL STOPS SHALL BE USED ONLY TO DESIGNATE APPROVED FIRE LANES.

LANDSCAPING LEGEND:

STREET TREES LIVE OAK, (15 TYP) *QUERCUS VIRGINIANA*
- 30 GALLON
- 2.5" MIN. CALIPER
- 8-12 FEET TALL
- 30 ' ON CENTER EACH WAY

SHRUBS KNOCK OUT ROSE (80 TYP) ROSA 'RADARAZZ'
- 5 GALLON
- 18" TALL
- ±3'-6" ON CENTER EACH WAY

SITE KEYNOTES:

1. BUILDING: PROPOSED ONE STORY BUIDLING; 35' X 300' = 10,500 SQ. FT.
2. BUILDING: PROPOSED ONE STORY BUIDLING; 35' X 130' = 4,550 SQ. FT. [FUTURE - PHASE 2]
3. PROPOSED 6" CONCRETE PAVING; 3,000 PSI, #4 @ 24" O.C.; 6" COMPACTED LIME STABILIZED SUB-GRADE @ 6% LIME; REF: C4.1 FOR PAVING DETAILS.
4. PROPOSED 6" CONCRETE CURB (TYP.) REFERENCE C4.1.
5. END PROPOSED 6" CONCRETE CURB; REFERENCE C4.1.
6. PROPOSED 5' WIDE PEDESTRIAN WALKWAY: 4" THICK CONC PAVEMENT; 3000 PSI; #3 @ 18"; 2" SAND 90% STD DENSITY. RE: C4.1.
7. PROPOSED A.D.A. RAMP COMPLYING WITH TXDOT PED-12A, TYPE 7; RE: C4.3
8. PROPOSED 4" PARKING LOT MARKINGS; COLOR TBD BY OWNER. PARKING STALL SIZE 9' (MIN) WIDE X 19' LONG TYPICAL UNO.
9. PROPOSED VAN ACCESSIBLE PARKING SPACE COMPLYING WITH TEXAS ACCESSIBILITY STANDARDS 502. VAN PARKING SPACE SHALL BE 8' WIDE MIN, SHALL BE MARKED TO DEFINE THE WIDTH, AND SHALL HAVE AN ADJACENT ACCESS AISLE OF 8' WIDE MIN.
10. PROPOSED ACCESSIBLE PARKING SPACE COMPLYING WITH TEXAS ACCESSIBILITY STANDARDS 502. PARKING SPACE SHALL BE 8' WIDE MIN, SHALL BE MARKED TO DEFINE THE WIDTH, AND SHALL HAVE AN ADJACENT ACCESS AISLE OF 5' WIDE MIN.
11. PROPOSED STREET TREES: REFER TO LANDSCAPING LEGEND FOR DETAILS.
12. PROPOSED STREET SHRUBS: REFER TO LANDSCAPING LEGEND FOR DETAILS.
13. GRASS AREA - NO PAVING.
14. PROPOSED TXDOT PED-12A TYPE 7 RAMP.
15. PROPOSED SITE PREMISE SIGN; (PYLON SIGNAGE SIZE, HEIGHT, & TYPE TBD BY OWNER) CAUTION DO NOT ENCROACH ON EXISTING AERIAL EASEMENT.
16. SEGMENTAL RETAINING WALL. RE: C2.0 FOR DETAILS.
17. PROPOSED FENCE ALONG PERIMETER OF DETENTION POND; 48 IN X 72 IN BLACK ALUMINUM FENCE PANEL FLAT TOP FOR 2-RAIL MODEL # FCS482EBL1 (HOME DEPOT) OR 6 FT CHAIN LINK FENCE; TO BE DETERMINED BY OWNER.
18. POND RAMP 45 FT LONG 15 FT WIDE ; 6:1 SLOPE. 6 INCH COMPACTED LIME STABILIZED SUBGRADE AT 6%.
19. PROPOSED 12 FT WIDE GATE ACCESS FOR ONSITE DETENTION POND.
20. EMERGENCY ESCAPE LADDER.

DRAINAGE KEYNOTES:
REFERENCE C2.0 FOR ALL DRAINAGE GRADES & OUTFALL DETAIL

- A. PROPOSED 24" X 24" TYPE "A" GRATE INLET (6 TYP). REFERENCE: C2.0 & C4.0.
- C. PROPOSED STORM SEWER OUTFALL CONNECTION TO EXISTING REGIONAL DETENTION POND. RE:C/S2.0
- D. PROPOSED ON-SITE STORM WATER DETENTION POND. REFERENCE: C2.0.
- E. PROPOSED ROCK FILTER DAM (18" HIGH). REFER TO "FILTER DAM AT DETENTION BASIN OUTFALL PIPE". RE: C4.3.
- E1. STANDARD MANHOLE WITH RIM AND COVER.

UTILITY KEYNOTES:
REFERENCE C3.0 FOR ALL UTILITY DETAILS.

- F. PROPOSED FIRE HYDRANT WATER LINE DCVA IN RIGHT OF WAY. RE: C3.0
- G. PROPOSED FIRE HYDRANT WATER LINE CONNECTION TO EXISTING WATER LINE. VERIFY LOCATION. REFERENCE: C3.0.

S.W.P.P.P. LEGEND:

- FF. FILTER FABRIC FENCE (REQUIRED) OFFSET INWARD — FF — FF —
- SCA. ALL WEATHER STABILIZED CONSTRUCTION ACCESS ROAD (REQUIRED) - RE: C4.2.
- IPB. INLET PROTECTION BARRIER (REQUIRED) - RE: C4.2.
- CTW. CONCRETE TRUCK WASH-OUT AREA (REQUIRED) - RE: C4.2.
- ROCK FILTER DAM. REFER TO "FILTER DAM AT DETENTION BASIN OUTFALL PIPE". RE: C4.2.
- FH. PROPOSED STD FIRE HYDRANT; SEE C3.0 FOR DETAILS
- SE. STORM DRAINAGE SEWER MANHOLE

APPROVED: for Development Coordinator
DATE: 4/13/18

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C.ENG
LICENSED ENGINEERS
TX FIRM REGISTRATION #: F-9871

STATE OF TEXAS
CHADI AYOUB
98170
LICENSED PROFESSIONAL ENGINEER

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY CHADI AYOUB, P.E. 98170 ON 10/31/2017.

REV	DATE	DESCRIPTION
	-	-

HAIDER ZAMAN WEST BELLFORT WAREHOUSE BUILDINGS
15545 WEST BELLFORT BLVD, SUGAR LAND, TX 77498

C.ENG. FILE #:	C17-575
DETAILED BY:	CA
DESIGNED BY:	CA
CHECKED BY:	CA
APPROVED BY:	CA
PAGE TITLE:	

SITE PLAN

SHEET NO.:
C1.0

DETENTION POND OWNERSHIP & MAINTENANCE NOTES:

PROVISIONS SHALL BE MADE BY THE OWNER TO ENSURE THAT THE DEVELOPMENT DETENTION FACILITY IS MAINTAINED AT ALL TIMES.

THE TOP OF ALL FLOOR SLABS SHALL A MINIMUM OF 93.50' ABOVE MEAN SEE 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 GRADE.

MINIMUM SLAB ELEVATION ANALYSIS:

1. 18 INCHES ABOVE THE NEAREST 100-YEAR BASE FLOOD ELEVATION (BFE): ——— NOT APPLICABLE (NO FLOOD ZONE)
2. ONE FOOT (12") ABOVE THE EXTREME EVENT PONDING OR SHEET FLOW ELEVATION ON THE SITE: ------ 92.40' + 1' (12") = 93.40'
3. EIGHTEEN (18) INCHES ABOVE THE LOWEST SIGNIFICANT CONTOUR SHOWN ON PLAT: ——— 92.00' + 1.50" (18") = 93.50'
4. EIGHTEEN (18) INCHES ABOVE THE DETENTION POND (WSEL) ON THE SITE: ——— 90.00' + 1'-6" (18") = 91.50'
5. EIGHTEEN (18) INCHES ABOVE THE WEST BELLFORT DETENTION FACILITY (WSEL) ON THE SITE: ——— 89.00' + 1'-6" (18") = 90.50'

TOP OF GRATE EXTREME PONDING EVENT ANALYSIS:

1. INLET A-1 ——— 91.50' + 0.80' = 92.30'
2. INLET A-2 ——— 91.50' + 0.80' = 92.30'
3. INLET A-3 ——— 91.50' + 0.80' = 92.30'
4. INLET A-4 ——— 91.50' + 0.80' = 92.30'
5. INLET A-5 ——— 91.50' + 0.80' = 92.30'

SITE KEYNOTES:

- A1 TYPE "A" GRATE INLET (5.00 CFS)
- A2 TYPE "A" GRATE INLET (5.00 CFS)
- A3 TYPE "A" GRATE INLET (5.00 CFS)
- A4 TYPE "A" GRATE INLET (5.00 CFS)
- A5 TYPE "A" GRATE INLET (5.00 CFS)
- A6 STANDARD MANHOLE WITH RIM COVER
- P1 150 L.F. OF 12" HDPE @ 1.00%
- P2 163 L.F. OF 15" HDPE @ 1.00%
- P3 161 L.F. OF 18" HDPE @ 1.00%
- P4 75 L.F. OF 24" HDPE @ 1.00%
- P5 76 L.F. OF 24" HDPE @ 1.00%
- P6 6 L.F. OF 24" RCP @ 0.50%
- N1 EROSION CONTROL: SLOPE PAVING OR INTERLOCKING CONCRETE BLOCK
- N2 SHEET FLOW PATH FOR EXTREME PONDING EVENTS
- N3 ROOF SLOPES FROM BACK OF BUILDING TO FRONT (PARKING AREA SIDE)
- N4 ROOF GUTTERS SHALL HAVE A MINIMUM OF THE FOLLOWING SPECS [REFER TO DOWNSPOUT & GUTTER SIZING REPORT THIS SHEET]:
  - DEPTH TO WIDTH RATIO = 0.75
  - MINIMUM GUTTER WIDTH = 7" [RECTANGULAR]
  - MINIMUM GUTTER DEPTH = 5½"

  ROOF DOWNSPOUTS SHALL HAVE A MINIMUM OF THE FOLLOWING SPECS:
  - MINIMUM DOWN SPOUT AREA = 11.47 IN² [2.75"X 4.70 RECTANGULAR]
  - MAXIMUM DOWN SPOUT SPACING = 65 FT
- N5 GALVANIZED STEEL BAR GRATE SCREEN 1½"X ⅜" @ 1½" SPACING O.C.

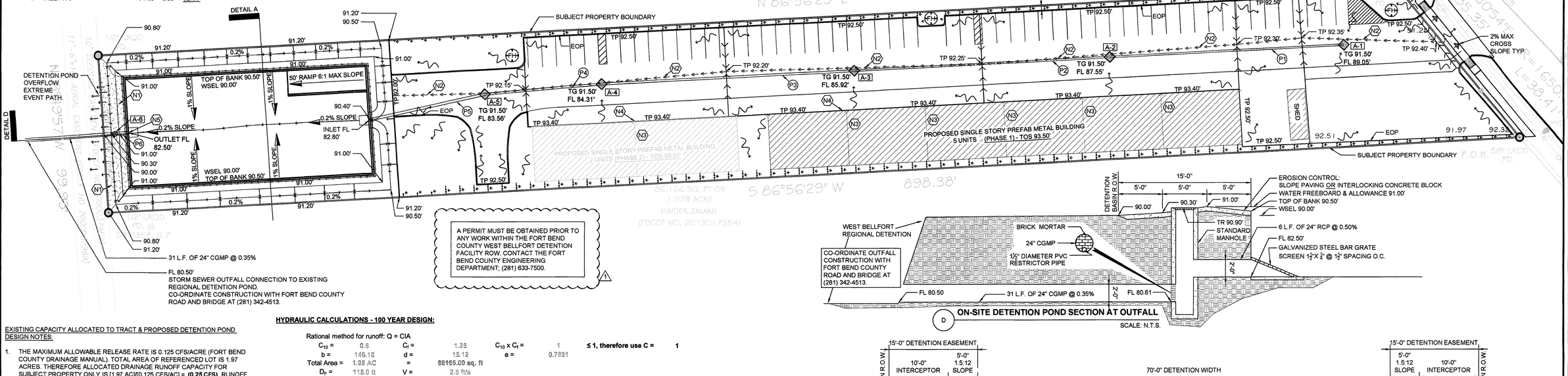
LEGEND:

- BOP ——— BOTTOM OF DETENTION POND
- CGMP ——— CORRUGATED GALVANIZES METAL PIPE
- EOP ——— END OF PAVEMENT
- EXIST ——— EXISTING
- FL ——— FLOW LINE
- HDPE ——— HIGH DENSITY POLYETHYLENE PIPE
- L.F. ——— LINEAR FEET
- PROP ——— PROPOSED
- TC ——— TOP OF CURB
- TG ——— TOP OF GRATE
- TP ——— TOP OF PAVEMENT
- TYP ——— TYPICAL
- WFE ——— WATER FREEBOARD ELEVATION
- WSEL ——— 100 YEAR WATER SURFACE ELEVATION
- SHEET FLOW PATH FOR EXTREME PONDING EVENTS
- ON-SITE STORM PIPE
- SHEET FLOW DIRECTION
- DIRECTION OF SLOPE

NOTES:

1. ALL PROPERTY TO DRAIN INTO THE DRAINAGE EASEMENT ONLY THROUGH AN APPROVED DRAINAGE STRUCTURE.
2. DETENTION POND SHOWN ON PLAN RESEMBLES THE ULTIMATELY RESERVED SINCE THE DESIGN ACCOUNTS FOR A COMPLETE TRACT DEVELOPMENT. NO FUTURE PHASING OR ADDITIONS IS PROPOSED. ANY FUTURE UNACCOUNTED FOR DETENTION POND EXPANSION WILL BE RESOLVED BY CONCRETE WALL RETAINING WALLS AND DEEPER POND.

SCALE IN FEET
1 INCH = 30 FEET



A PERMIT MUST BE OBTAINED PRIOR TO ANY WORK WITHIN THE FORT BEND COUNTY WEST BELLFORT DETENTION FACILITY ROW. CONTACT THE FORT BEND COUNTY ENGINEERING DEPARTMENT, (281) 633-7500.

D ON-SITE DETENTION POND SECTION AT OUTFALL
SCALE: N.T.S.

EXISTING CAPACITY ALLOCATED TO TRACT & PROPOSED DETENTION POND DESIGN NOTES:

1. THE MAXIMUM ALLOWABLE RELEASE RATE IS 0.125 CFS/ACRE (FORT BEND COUNTY DRAINAGE MANUAL). TOTAL AREA OF REFERENCED LOT IS 1.97 ACRES. THEREFORE ALLOCATED DRAINAGE RUNOFF CAPACITY FOR SUBJECT PROPERTY ONLY IS [1.97 AC](0.125 CFS/AC) = **(0.25 CFS)**. RUNOFF DISCHARGES TO AN EXISTING REGIONAL DETENTION "POND 1" DA-DET/13.3 LOCATED ON THE BACK OF THE PROPERTY AS SHOWN ON REFERENCED REPORT AND PLANS ABOVE.
2. IMPERVIOUS AREA ADDED IS 1.58 ACRES TO EXISTING SITE. TOTAL AREA OF REFERENCED TRACT IS 1.978 ACRES. EXISTING TRACT HAS NO IMPERVIOUS AREA CURRENTLY ON SITE AS SHOWN ON MOST RECENT SURVEY. THUS, TOTAL AREA OF IMPERVIOUS (EXISTING) IS 0.0 ACRES.
3. THE 100 YEAR STORM FREQUENCY DETENTION POND VOLUME IS BASED ON A DETENTION RATE OF 0.9 AC-FT/AC (78.5% IMPERVIOUS).
4. A RESTRICTOR OUTFALL PIPE OF (1½) INCH DIAMETER IS PROPOSED TO DISCHARGE WATER FROM THE DETENTION POND TO THE EXISTING REGIONAL DETENTION POND LOCATED ON THE BACK OF THE PROPERTY. DESIGN DISCHARGE FLOW RATE IS AT (0.25 CFS).
5. THE TOTAL MAXIMUM INFLOW RATE INTO PROPOSED DETENTION POND = 15.76 CFS THROUGH INLETS A-5 AS SHOWN ON THIS SHEET (C2.0).
6. DETENTION PROVIDED = 78,675 FT³ > ALLOWABLE DETENTION = 77,549 FT³
7. WATER FREEBOARD & ALLOWANCE PROVIDED = 1.00 FT ABOVE WSEL

SMACNA **Downspout & Gutter Sizing Reports**

Project Name: HAIDER ZAMAN WEST BELLFORT WAREHOUSE BUILDINGS

Rainfall Intensity (in/hr): 11.65
Rainfall Intensity manually entered by user

Roof Rainfall Design Area (ft²): 2,275.00
Area of Largest Roof Serving a Single Gutter System
Design Area manually entered by user

Gutter in Lineal Ft: 65
Length of Largest Roof Serving a Single Gutter System

M (depth to width ratio): 0.75

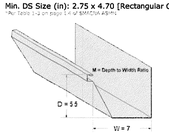
Min. Gutter Width (in.): 7 [Rectangular]

Min. Gutter Depth (in.): 5.5

# of Downspouts: 2

Min. Area per DS (in²): 11.47

Min. DS Size (in): 2.75 x 4.70 [Rectangular Corrugated]
As Taken From Page 54 of SMACNA Manual



Calculations are derived using the 7th Edition of SMACNA's Architectural Sheet Metal Manual

HYDRAULIC CALCULATIONS - 100 YEAR DESIGN:

Rational method for runoff: Q = CIA

C_{10} =	0.8	C_f =	1.25	$C_{10} \times C_f$ =	1	≤ 1, therefore use C =	1
b =	146.18	d =	15.12	e =	0.7851		
Total Area =	1.98 AC	=	86166.00 sq. ft				
D_F =	115.0 ft	V =	2.5 ft/s				
Pavement, T =		D_F / (60 V) =	0.77 mins				
D_F =	650.0 ft	V =	3.2 ft/s				
Pipes, T =		D_F / (60 V) =	3.41 mins				
T_c =	4.2 mins	<	10.00 mins	Therefore, use T_c =	10.00 mins		

Intensity, I = b / (d + Tc)^e = 11.63409329 (100 YR, Hydro35/TP-40) inches/hour

Manning's Equation for maximum pipe flow capacity, Q cfs = VA = $(1.49/n)A(R_h^{2/3})S^{1/2}$

SUB-AREA	C	Intensity, I	Area, A	Flow, Q cfs (100-year)
A-1	1	11.63409329	0.29 AC	3.322091017
A-2	1	11.63409329	0.34 AC	3.989519257
A-3	1	11.63409329	0.32 AC	3.729039656
A-4	1	11.63409329	0.27 AC	3.158015332
A-5	1	11.63409329	0.08 AC	0.92207377
			1.30 AC	

TRACT												
Area	TO	Area	Q_{cum}	d (in)	A	Pipe Type	n	R_h	S	Q_{max}	V	$Q_{cum} < Q_{max}$
A-1	TO	A-2	3.322091017	12 in	0.79 sq. ft	HDPE	0.011	0.25	0.01	4.222 cfs	5.376 ft/s	OK
A-2	TO	A-3	7.311610274	15 in	1.23 sq. ft	HDPE	0.011	0.3125	0.01	7.655 cfs	6.238 ft/s	OK
A-3	TO	A-4	11.04064993	18 in	1.77 sq. ft	HDPE	0.011	0.375	0.01	12.448 cfs	7.044 ft/s	OK
A-4	TO	A-5	14.19866526	24 in	3.14 sq. ft	HDPE	0.011	0.5	0.01	26.808 cfs	8.533 ft/s	OK
A-5	TO	POND	15.12073903	24 in	3.14 sq. ft	HDPE	0.011	0.5	0.01	26.808 cfs	8.533 ft/s	OK

Pipe restrictor flow rate calculation: On-site Detention pond to regional detention facility

Orifice Calculations:
$D = Q^{0.5} / (2.25H^{0.25})$

Flow Line =	79.5 Ft				
WSEL =	90 Ft				
Q =	0.25 CFS				
H =	10.5 Ft				
D =	0.12345 FT	=	1.5	in	**Therefore, use a 1.5" restrictor pipe**

Detention Summary:

	sq in	sq ft	acres
Total area tract A =	12407904	86166.00 sq. ft	1.98 AC

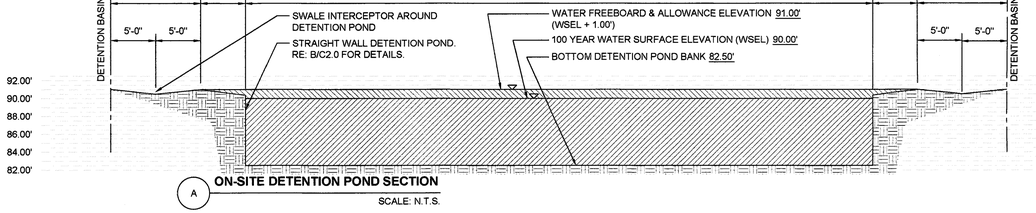
PERVIOUS AREA CALCULATION			
Green Area 1 =	981792	6818.00 sq. ft	0.16 AC
Green Area 2 =	590400	4100.00 sq. ft	0.09 AC
Green Area 3 =	917710	6372.9859	0.15 AC
Total pervious area =			0.40 AC

IMPERVIOUS AREA CALCULATION			
Area added =	9897439	68732.22 sq. ft	1.58 AC
Total impervious area =		68732.22 sq. ft	1.58 AC

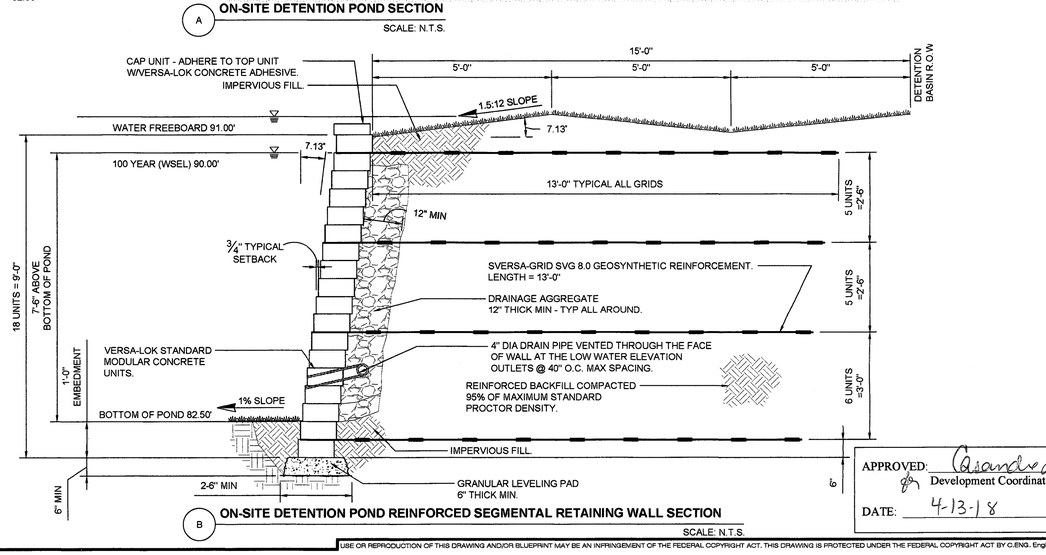
% impervious =	79.8	%
Detention required =	0.9	ac-ft/ft

Total detention pond volume required (100 year storm frequency) = [43,560 x (0.90 x A_{TOTAL}] = 77549 cub ft

Pond width =	70.0 ft
Pond length =	155.0 ft
Max depth (100 yr WSEL) 1 =	7.5 ft
Detention pond volume (ramp in) =	81375 cub ft
Ramp volume =	2700 cub ft
Total detention volume (ramp ex) =	78675 cub ft > 77549 cub ft , Pond provided is greater than required



A ON-SITE DETENTION POND SECTION
SCALE: N.T.S.



B ON-SITE DETENTION POND REINFORCED SEGMENTAL RETAINING WALL SECTION
SCALE: N.T.S.

APPROVED: Development Coordinator
DATE: 4-13-18

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TX FIRM REGISTRATION #: F-9871

STATE OF TEXAS
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98170
LICENSED PROFESSIONAL ENGINEER

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY CHADI AYOUB, P.E. 98170 ON 03/09/2018.

REV	DATE	DESCRIPTION
	-	-

HAIDER ZAMAN WEST BELLFORT WAREHOUSE BUILDINGS
15545 WEST BELLFORT BLVD, SUGAR LAND, TX 77498

C.ENG. FILE #:	C17-575
DETAILED BY:	CA
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PAGE TITLE:

GRADING & DRAINAGE PLAN

SHEET NO.:

C2.0

PROPOSED FIRE HYDRANT

CLEAN-OUT

SANITARY SEWER MANHOLE

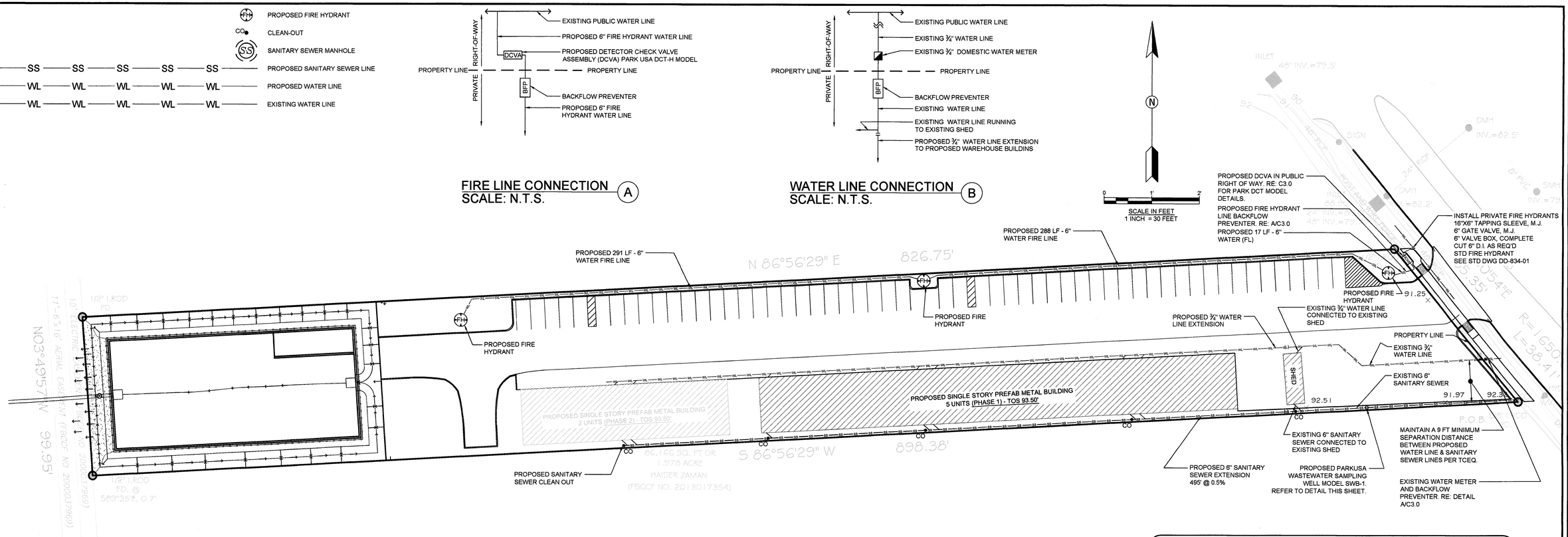
SS SS SS SS SS PROPOSED SANITARY SEWER LINE

WL WL WL WL WL PROPOSED WATER LINE

WL WL WL WL WL EXISTING WATER LINE

FIRE LINE CONNECTION A
SCALE: N.T.S.

WATER LINE CONNECTION B
SCALE: N.T.S.

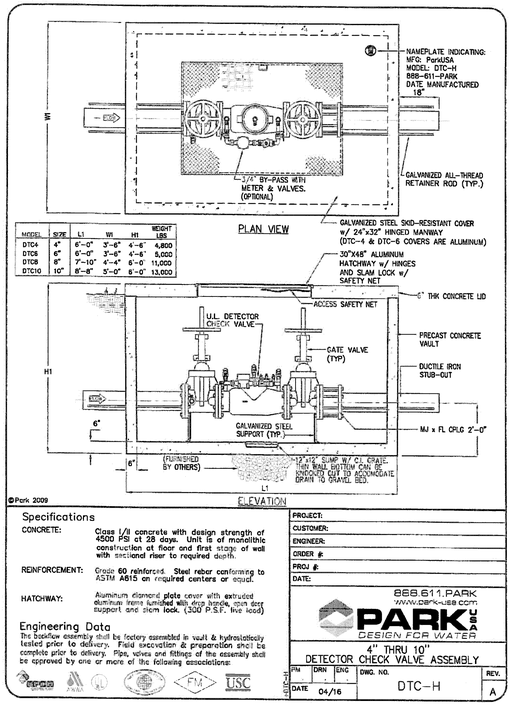


TYPICAL UTILITY NOTES:

1. PUBLIC AND PRIVATE UTILITY CROSSINGS OTHER THAN SANITARY SEWER: WHERE A WATER LINE CROSSES ANOTHER UTILITY OTHER THAN A SANITARY SEWER, A MINIMUM OF 12 INCHES OF VERTICAL CLEARANCE MUST BE MAINTAINED BETWEEN THE OUTSIDE WALL OF THE WATER LINE AND THE OUTSIDE WALL OF THE UTILITY.
2. WHEN NEW POTABLE WATER DISTRIBUTION LINES ARE CONSTRUCTED, THEY SHALL BE INSTALLED NO CLOSER THAN 9 FEET IN ALL DIRECTIONS TO WASTEWATER COLLECTION FACILITIES. ALL SEPARATION DISTANCES SHALL BE MEASURED FROM THE OUTSIDE SURFACE OF EACH OF THE RESPECTIVE PIECES.
3. POTABLE WATER DISTRIBUTION LINES AND WASTEWATER MAINS OR LATERALS THAT FORM PARALLEL UTILITY LINES SHALL BE INSTALLED IN SEPARATE TRENCHES.
4. THE SUBJECT TRACT IS LOCATED WITHIN THE BOUNDARIES OF FORT BEND COUNTY FRESH WATER SUPPLY DISTRICT 2.
5. THE CONTRACTOR IS TO CONTACT BOTH THE DISTRICT'S OPERATOR AND ENGINEER 48 HOURS IN ADVANCE OF MOBILIZING TO THE SITE:
   - 5.1. OPERATOR: ENVIRONMENTAL DEVELOPMENT PARTNERS 17495 VILLAGE GREEN HOUSTON, TX 77040 (832) 467-1599
   - 5.2. ENGINEER: SHERRINGTON-HUMBLE, LLC 9829 WHITHORN DRIVE HOUSTON, TX 77095 (281) 656-8837
6. ONLY THE DISTRICT OPERATOR IS AUTHORIZED TO OPERATE THE DISTRICT'S WATER DISTRIBUTION FACILITIES.
7. THE DISTRICT OPERATOR WILL FURNISH AND INSTALL ALL METERS AND MAKE ALL TAPS IN ACCORDANCE WITH THE DISTRICT'S RATE ORDER.
8. THE CONTRACTOR WILL FURNISH AND INSTALL ALL BACKFLOW PREVENTERS.
9. THE DISTRICT OPERATOR IS TO INSPECT ALL WATER, SANITARY, AND STORM UTILITIES PRIOR TO PLACEMENT OF ANY BEDDING AND BACKFILL MATERIAL.
10. ALL INTERNAL WATER LINES AND SANITARY SEWER LINES ARE PRIVATE AND TO BE MAINTAINED BY THE PROPERTY OWNER.

NOTES TO REVIEWER:

1. THERE IS AN EXISTING ¾" WATER LINE AND WATER METER ON-SITE CONNECTED TO THE EXISTING SHED. THE EXISTING WATER LINE WILL BE EXTENDED TO THE PROPOSED WAREHOUSE BUILDINGS.
2. THERE IS AN EXISTING 6" SANITARY SEWER LINE ON-SITE CONNECTED TO THE EXISTING SHED. THE EXISTING SEWER LINE WILL BE EXTENDED TO THE PROPOSED WAREHOUSE BUILDINGS.
3. THE TOTAL NUMBER OF UNITS PROPOSED IN ADDITION TO THE EXISTING SHED IS 7 UNITS.
4. EACH UNIT WILL HAVE (1) RESTROOM. EACH RESTROOM WILL HAVE (1) WASHING SINK AND (1) TOILET.
5. EACH UNIT WILL ALSO HAVE AN ADDITIONAL SERVICE SINK.
6. THE EXISTING SHED HAS (1) RESTROOM WITH (1) WASHING SINK AND (1) TOILET.
7. THE TOTAL NUMBER OF TOILETS ON-SITE (EXISTING + PROPOSED) IS (8).
8. THE TOTAL NUMBER OF WASHING SINKS ON-SITE (EXISTING + PROPOSED) IS (8).
9. THE TOTAL NUMBER OF SERVICE SINKS ON-SITE (EXISTING + PROPOSED) IS (7).



MODEL	SIZE	L1	W1	H1	WEIGHT LBS
DTC4	4"	6'-0"	3'-6"	4'-6"	4,800
DTC6	6"	6'-0"	3'-6"	4'-6"	5,000
DTC8	8"	7'-10"	4'-4"	6'-0"	11,000
DTC10	10"	8'-8"	5'-0"	6'-0"	13,000

Specifications

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

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

HATCHWAY: Aluminum diamond plate cover with extruded aluminum frame furnished with drop handle, cam dog support and stem lock. (300 P.S.F. live load)

Engineering Data

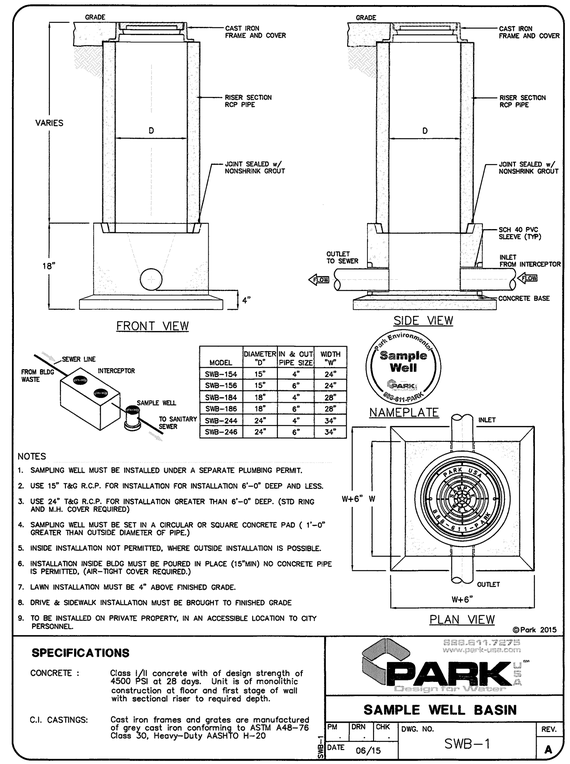
The backflow assembly shall be factory assembled in vault & hydrostatically tested prior to delivery. Field excavation & preparation shall be complete prior to delivery. Pipe, valves and fittings of the assembly shall be approved by one or more of the following associations:

PROJECT:
CUSTOMER:
ENGINEER:
ORDER #:
PROJ #:
DATE:

888.611.PARK www.park-usa.com
PARK USA DESIGN FOR WATER

4" THRU 10" DETECTOR CHECK VALVE ASSEMBLY

PM	DRN	ENG	DWG. NO.	REV.
DATE 04/16			DTC-H	A



MODEL	DIAMETER "D"	IN & OUT PIPE SIZE	WIDTH "W"
SWB-154	15"	4"	24"
SWB-156	15"	6"	24"
SWB-184	18"	4"	28"
SWB-186	18"	6"	28"
SWB-244	24"	4"	34"
SWB-246	24"	6"	34"

NOTES

1. SAMPLING WELL MUST BE INSTALLED UNDER A SEPARATE PLUMBING PERMIT.
2. USE 15" T&G R.C.P. FOR INSTALLATION FOR INSTALLATION 6'-0" DEEP AND LESS.
3. USE 24" T&G R.C.P. FOR INSTALLATION GREATER THAN 6'-0" DEEP. (STD RING AND M.H. COVER REQUIRED)
4. SAMPLING WELL MUST BE SET IN A CIRCULAR OR SQUARE CONCRETE PAD (1'-0" GREATER THAN OUTSIDE DIAMETER OF PIPE.)
5. INSIDE INSTALLATION NOT PERMITTED, WHERE OUTSIDE INSTALLATION IS POSSIBLE.
6. INSTALLATION INSIDE BLDG MUST BE POURED IN PLACE (15"MIN) NO CONCRETE PIPE IS PERMITTED, (AIR-TIGHT COVER REQUIRED.)
7. LAWN INSTALLATION MUST BE 4" ABOVE FINISHED GRADE.
8. DRIVE & SIDEWALK INSTALLATION MUST BE BROUGHT TO FINISHED GRADE
9. TO BE INSTALLED ON PRIVATE PROPERTY, IN AN ACCESSIBLE LOCATION TO CITY PERSONNEL.

SPECIFICATIONS

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

C.I. CASTINGS: Cast iron frames and grates are manufactured of grey cast iron conforming to ASTM A48-76 Class 30, Heavy-Duty AASHTO H-20

888.611.PARK www.park-usa.com
PARK USA Design for Water

SAMPLE WELL BASIN

PM	DRN	CHK	DWG. NO.	REV.
DATE 06/15			SWB-1	A

APPROVED: _____ by Development Coordinator

DATE: 4/13/18

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C.ENG LICENSED ENGINEERS TX FIRM REGISTRATION #: F-10671

STATE OF TEXAS CHADI AYOUB 98170 LICENSED PROFESSIONAL ENGINEER

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY CHADI AYOUB, P.E. 98170 ON 11/27/2017.

REV	DATE	DESCRIPTION
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HAIDER ZAMAN WEST BELLFORT WAREHOUSE BUILDINGS

15545 WEST BELLFORT BLVD, SUGAR LAND, TX 77498

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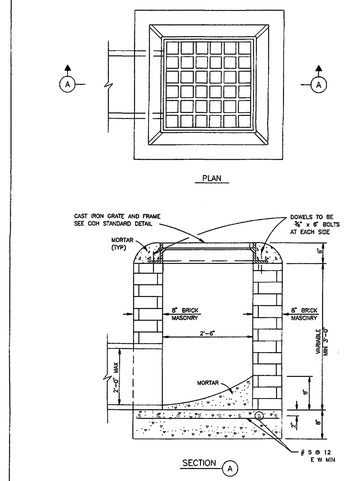
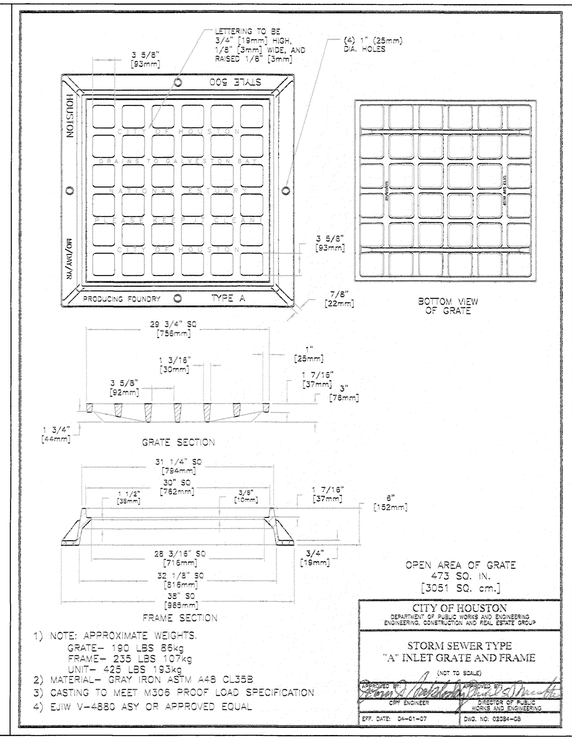
WATER & SANITARY PLAN

SHEET NO.:

C3.0



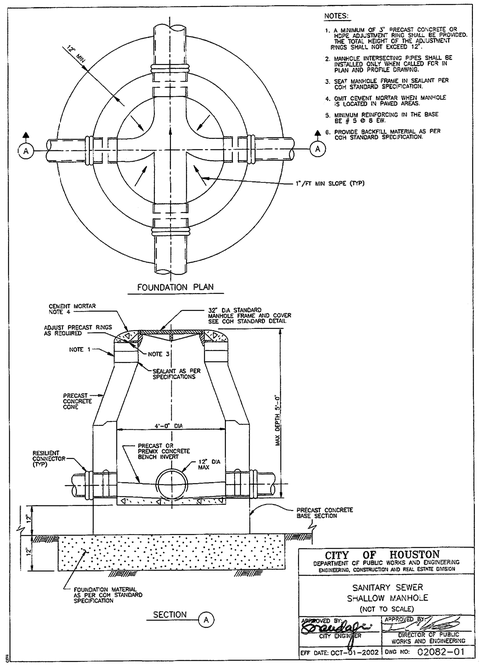
CITY OF HOUSTON	
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING ENGINEERING, CONSTRUCTION AND REAL ESTATE DIVISION	
STORM SEWER TYPE "A" GRATE INLET (NOT TO SCALE)	
APPROVED BY: CITY ENGINEER	APPROVED BY: DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFF DATE: OCT-01-2002	DWG NO: 02632-01



1) NOTE: APPROXIMATE WEIGHTS.
GRATE= 190 LBS 86kg
FRAME= 235 LBS 107kg
UNIT= 425 LBS 193kg
2) MATERIAL= GRAY IRON ASTM A48 CL35B
3) CASTING TO MEET M306 PROOF LOAD SPECIFICATION
4) EJIW V-4880 ASY OR APPROVED EQUAL

OPEN AREA OF GRATE
473 SQ. IN.
[3051 SQ. cm.]

CITY OF HOUSTON	
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING ENGINEERING, CONSTRUCTION AND REAL ESTATE GROUP	
STORM SEWER TYPE "A" INLET GRATE AND FRAME (NOT TO SCALE)	
APPROVED BY: CITY ENGINEER	APPROVED BY: DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFF. DATE: 04-01-07	DWG. NO: 02084-08



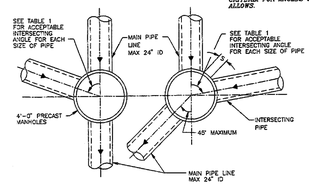
NOTES:
1. A MINIMUM OF 5" PRECAST CONCRETE OR CAST IRON ADJUSTMENT RING SHALL BE PROVIDED. THE TOTAL HEIGHT OF THE ADJUSTMENT RINGS SHALL NOT EXCEED 12".
2. MANHOLE INTERSECTING PIPES SHALL BE LAID ON A 45° OR 90° ANGLE FOR IN PLAN AND PROFILE DRAWING.
3. SEAT MANHOLE FRAME IN SEALANT PER COH STANDARD SPECIFICATION.
4. GRIT CEMENT MORTAR WHEN MANHOLE IS LOCATED IN PAVED AREAS.
5. MINIMUM REINFORCING IN THE BASE IS # 5 @ 6 EW.
6. PROVIDE BACKFILL MATERIAL AS PER COH STANDARD SPECIFICATION.

CITY OF HOUSTON	
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING ENGINEERING, CONSTRUCTION AND REAL ESTATE DIVISION	
SANITARY SEWER SHALLOW MANHOLE (NOT TO SCALE)	
APPROVED BY: CITY ENGINEER	APPROVED BY: DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFF DATE: OCT-01-2002	DWG NO: 02082-01

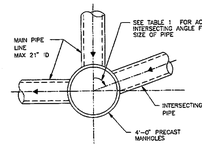
NOTES ON USE OF STANDARD DETAIL 02082-02

NOTES TO SPECIFIER:

1. "-" INDICATES THAT A SPECIAL DESIGN OR THE NEXT LARGER MANHOLE SIZE SHALL BE USED.
2. TABLE 1 IS BASED ON A MIN SEPARATION DISTANCE OF 1 FT. I.E. OR INTERSECTION PIPE OD/2, WHICHEVER IS GREATER, BETWEEN MAIN AND INTERSECTING PIPES ALONG THE MANHOLE INSIDE WALL ARC.
3. PIPE WALL THICKNESS USED IN TABLE 1 ARE BASED ON RCP. THE DESIGN ENGINEER MAY CALCULATE TO USE THINNER WALL PIPES CAN MEET THE SEPARATION CRITERIA FOR ANGLES SMALLER THAN THE TABLE ALLOWS.



MAX 24" ID MAIN PIPE ALLOWED FOR STRAIGHT THROUGH TO 45° DEFLECTION

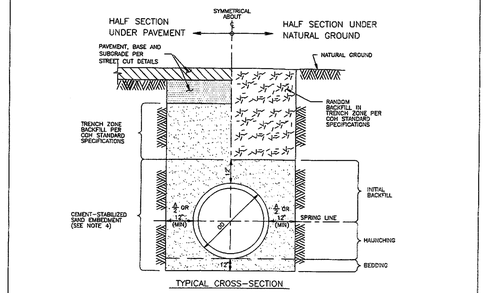


MAX 21" ID MAIN PIPE ALLOWED FOR 45° TO 90° DEFLECTION

TABLE 1
MIN ANGLE AND INTERSECTING PIPE SIZES FOR A 4'-0" DIA MANHOLE

INTERSECTING PIPE SIZE (INCHES)	MIN INTERSECTING ANGLE IN DEGREES FOR VARIOUS MAIN PIPE SIZES IN INCHES						
	6"	8"	10"	12"	15"	18"	21"	24"
6	55	58	60	65	70	75	80	85
8		60	63	68	73	77	82	87
10			66	71	75	80	85	90
12				78	80	85	90	–
15					85	90	–	–
18	NOT APPLICABLE UNLESS HYDRAULICS DICTATE (INTERSECTING PIPE > MAIN PIPE)					–	–	–
21							–	–
24								–

CITY OF HOUSTON	
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING ENGINEERING, CONSTRUCTION AND REAL ESTATE DIVISION	
SANITARY SEWER 4'-0" DIAMETER PRECAST CONCRETE MANHOLE NOTES (NOT TO SCALE)	
APPROVED BY: CITY ENGINEER	APPROVED BY: DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFF DATE: OCT-01-2002	DWG NO: 02082N-02

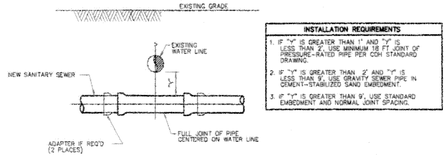


NOTES:
1. THIS DETAIL MAY BE USED ONLY FOR PIPE DIAMETERS AND CONDITIONS PER COH STANDARD SPECIFICATION. SEE SPECIFICATION FOR REQUIREMENTS IN OTHER CONDITIONS.
2. MIN TRENCH WIDTH SHALL BE PIPE OD PLUS AN ALLOWANCE "A" FOR THE NOMINAL PIPE SIZE:

NOMINAL PIPE SIZE	"A"
18" TO 30"	24"
OVER 30"	36"

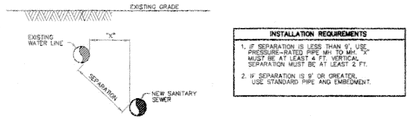
3. MAX TRENCH WIDTH SHALL BE NOT GREATER THAN MIN TRENCH WIDTH PLUS 24 INCHES, UNLESS OTHERWISE NOTED.
4. ALTERNATIVE EMBEDMENT BACKFILL MATERIALS FOR FORCE MAINS MAY BE ALLOWED. SEE COH STANDARD SPECIFICATIONS.

CITY OF HOUSTON	
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING ENGINEERING, CONSTRUCTION AND REAL ESTATE DIVISION	
SANITARY OR STORM SEWER BEDDING AND BACKFILL FOR DRY STABLE TRENCH (NOT TO SCALE)	
APPROVED BY: CITY ENGINEER	APPROVED BY: DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFF DATE: OCT-01-2002	DWG NO: 02317-03



INSTALLATION REQUIREMENTS
1. IF "A" IS GREATER THAN 1' AND "B" IS LESS THAN 3', USE MINIMUM 18 FT JOINT OF PRESSURE-RATED PIPE PER COH STANDARD DRAWING.
2. IF "A" IS GREATER THAN 3' AND "B" IS LESS THAN 9', USE GRAVITY SEWER PIPE IN CEMENT-STABILIZED SAND EMBEDMENT.
3. IF "A" IS GREATER THAN 9', USE STANDARD EMBEDMENT AND NORMAL JOINT SPACING.

NEW SANITARY SEWER CROSSING EXISTING WATER LINE



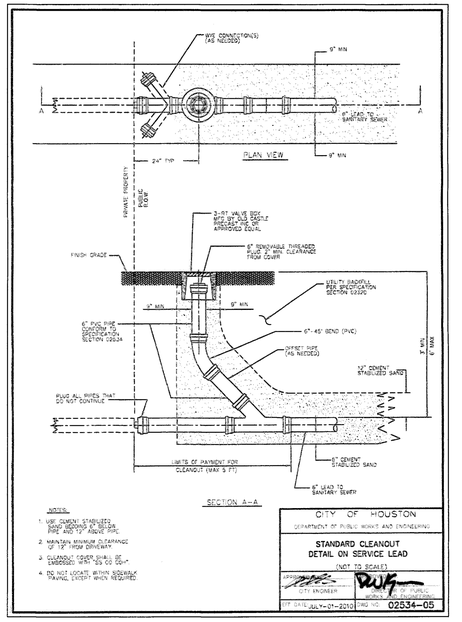
INSTALLATION REQUIREMENTS
1. IF SEPARATION IS LESS THAN 9', USE PRESSURE-RATED PIPE WITH TOP OF PIPE ELEVATION AT LEAST 2 FT. VERTICAL SEPARATION MUST BE AT LEAST 2 FT.
2. IF SEPARATION IS 9' OR GREATER, USE STANDARD PIPE AND EMBEDMENT.

NEW SANITARY SEWER PARALLEL TO EXISTING WATER LINE

NOTES:
1. SANITARY SEWER MUST BE BELOW WATER LINE WHEREVER POSSIBLE. WHEN WATERLINE IS BELOW THE SANITARY SEWER PROVIDE MINIMUM 2 FT SEPARATION AND INSTALL PIPE IN ACCORDANCE TO CHAPTER 7 TABLE 7.3 OF COH DESIGN MANUAL.
2. WHEN PRESSURE-RATED PIPE IS REQUIRED, PROVIDE PIPE WITH MINIMUM 150 psi PRESSURE RATING.
3. ADAPTERS MUST BE FACTORY MOLDED OR FABRICATED, WITH RING STIFFNES AT LEAST EQUAL TO THE ADJACENT PIPE. USE OF FIELD CUT AND USING RESILIENT GASKET OF SEAL MATERIAL FLEXIBLE RUBBER "BOOT" TYPE ADAPTERS WILL NOT BE ACCEPTED.
4. INSTALL FORCE MAINS SAME AS FOR GRAVITY SEWER, USING SPECIFIED PRESSURE PIPE.
5. "H" MUST ALWAYS BE GREATER THAN OR EQUAL TO 1 FT FOR PRESSURE RATED SS AND 2 FT FOR NON-PRESSURE RATED SS.
6. "X" MUST BE GREATER THAN OR EQUAL TO 4 FT.
7. ALTERNATIVES MAY BE SHOWN ON THE DRAWINGS OR DESCRIBED IN THE SPECIFICATIONS.
8. SEPARATION REQUIREMENTS SHOWN HERE DO NOT APPLY TO SERVICE CONNECTIONS – REFER TO PLUMBING CODE FOR APPLICABLE REQUIREMENTS.

INSTALLING SANITARY SEWERS CROSSING OR PARALLEL TO WATER LINES

CITY OF HOUSTON	
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING	
SANITARY SEWER INSTALLING SANITARY SEWERS CROSSING OR PARALLEL TO WATER LINES (NOT TO SCALE)	
APPROVED BY: CITY ENGINEER	APPROVED BY: DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFF DATE: JUL-01-2010	DWG NO: 02531-05



NOTES:
1. USE CEMENT STABILIZED SAND BEDDING AT SOLID PIPE AND 12" ABOVE PIPE
2. MAINTAIN MINIMUM CLEARANCE OF 12" FROM DRIVEWAY
3. CLEANOUT COVER SHALL BE EMBEDDED WITH SOD OR GRASS
4. DO NOT LOCATE WITHIN SIDEWALK TRAVEL EXCEPT WHEN REQUIRED

CITY OF HOUSTON	
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING	
STANDARD CLEANOUT DETAIL ON SERVICE LEAD (NOT TO SCALES)	
APPROVED BY: CITY ENGINEER	APPROVED BY: DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFF DATE: JUL-01-2010	DWG NO: 02534-05

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STATE OF TEXAS
CHADI AYOUB
98170
LICENSED PROFESSIONAL ENGINEER

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY CHADI AYOUB, P.E. 98170 ON 10/31/2017.

REV	DATE	DESCRIPTION

HAIDER ZAMAN WEST BELLFORT WAREHOUSE BUILDINGS

15545 WEST BELLFORT BLVD, SUGAR LAND, TX 77498

C.ENG. FILE #:	C17-375
DETAILED BY:	CA
DESIGNED BY:	CA
CHECKED BY:	CA
APPROVED BY:	CA
PAGE TITLE:	STORM, SEWER AND WATER LINE DETAILS
SHEET NO.:	C4.0

APPROVED: Development Coordinator
DATE: 4-13-18

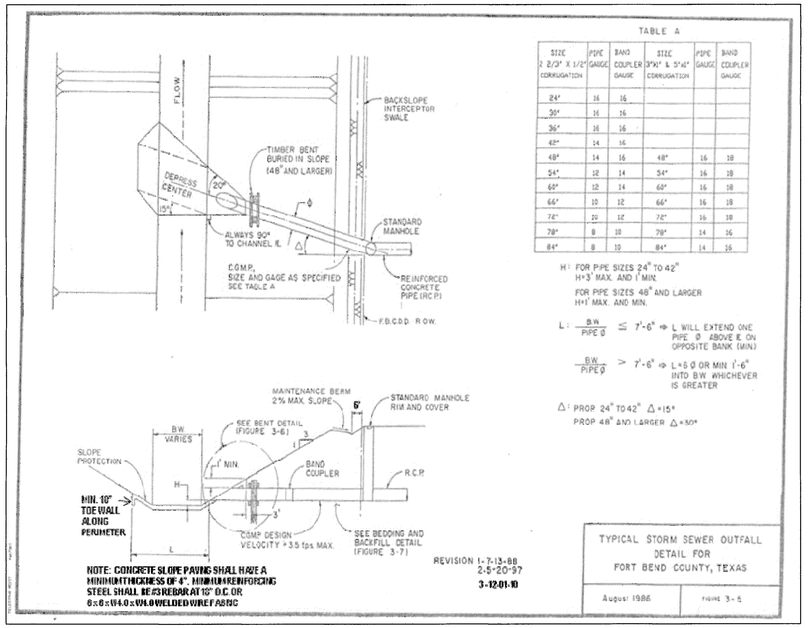


TABLE A

SIZE 2 2/3" X 1/2" CORRUGATION	PIPE GAUGE	BAND COUPLER GAUGE	SIZE 3"X1" & 5"x1" CORRUGATION	PIPE GAUGE	BAND COUPLER GAUGE
24"	16	16			
30"	16	16			
36"	16	16			
42"	14	16			
48"	14	16	48"	16	18
54"	12	14	54"	16	18
60"	12	14	60"	16	18
66"	10	12	66"	16	18
72"	10	12	72"	16	18
78"	8	10	78"	14	16
84"	8	10	84"	14	16

H: FOR PIPE SIZES 24" TO 42"
H=3' MAX. AND 1' MIN.
FOR PIPE SIZES 48" AND LARGER
H=1' MAX. AND MIN.

$L: \frac{BW}{PIPE\ \emptyset} \leq 7'\text{-}6" \Rightarrow$ L WILL EXTEND ONE PIPE $\emptyset$ ABOVE R ON OPPOSITE BANK (MIN.)

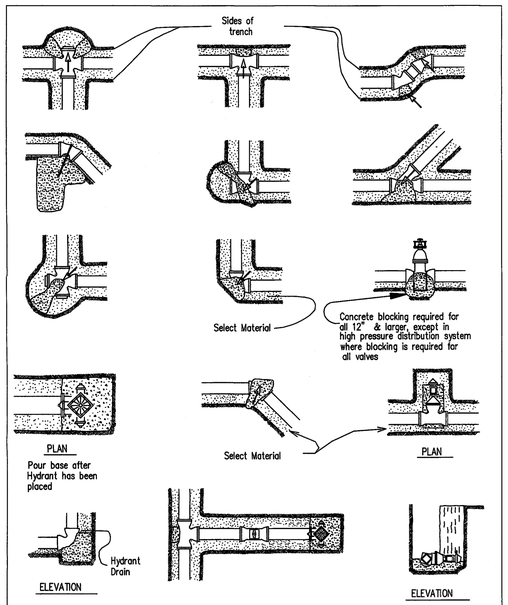
$\frac{BW}{PIPE\ \emptyset} > 7'\text{-}6" \Rightarrow$ L+6 $\emptyset$ OR MIN 1'-6" INTO B.W. WHICHEVER IS GREATER

Δ: PROP 24" TO 42" Δ=15°
PROP 48" AND LARGER Δ=30°

REVISION 1-7-13-88
2-5-20-97
3-12-01-10

TYPICAL STORM SEWER OUTFALL DETAIL FOR FORT BEND COUNTY, TEXAS

August 1986 | FIGURE 3-5

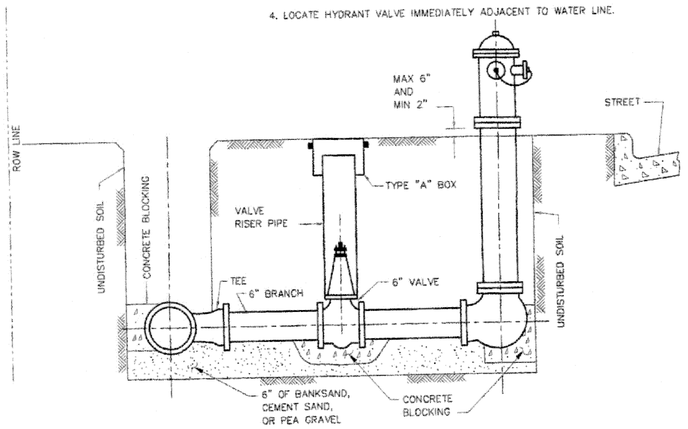


CONCRETE THRUST BLOCK DETAILS – WATER MAINS

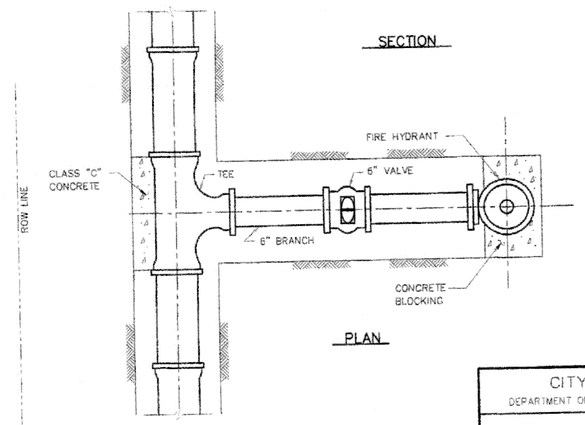
NOT TO SCALE

NOTES:

1. LOCATE FIRE HYDRANTS AT PCs OF THE INTERSECTION CURB RADIUS, 3 FEET BEHIND CURB OR PROJECTED FUTURE CURB.
2. ON OPEN-DITCH ROADWAYS, SET THE FIRE HYDRANTS WITH IN 5 FEET OF RIGHTS-OF-WAY LINES.
3. FIRE HYDRANT STEAMER NOZZLE SHALL FACE THE STREET.
4. LOCATE HYDRANT VALVE IMMEDIATELY ADJACENT TO WATER LINE.



SECTION



PLAN

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

STANDARD
FIRE HYDRANT DETAIL
(NOT TO SCALE)

APPROVED: CITY ENGINEER | APPROVED: DIRECTOR, PUBLIC WORKS AND ENGINEERING

EFF. DATE: JULY-01-2010 | DWG NO: 02520-01

APPROVED: Development Coordinator
DATE: 4/13/18

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REV	DATE	DESCRIPTION
	-	-

HAIDER ZAMAN WEST BELLFORT WAREHOUSE BUILDINGS

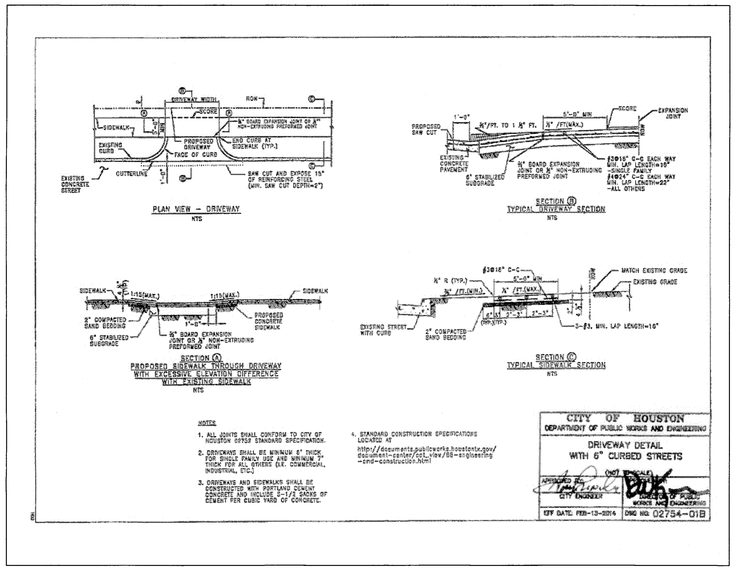
15545 WEST BELLFORT BLVD, SUGAR LAND, TX 77498

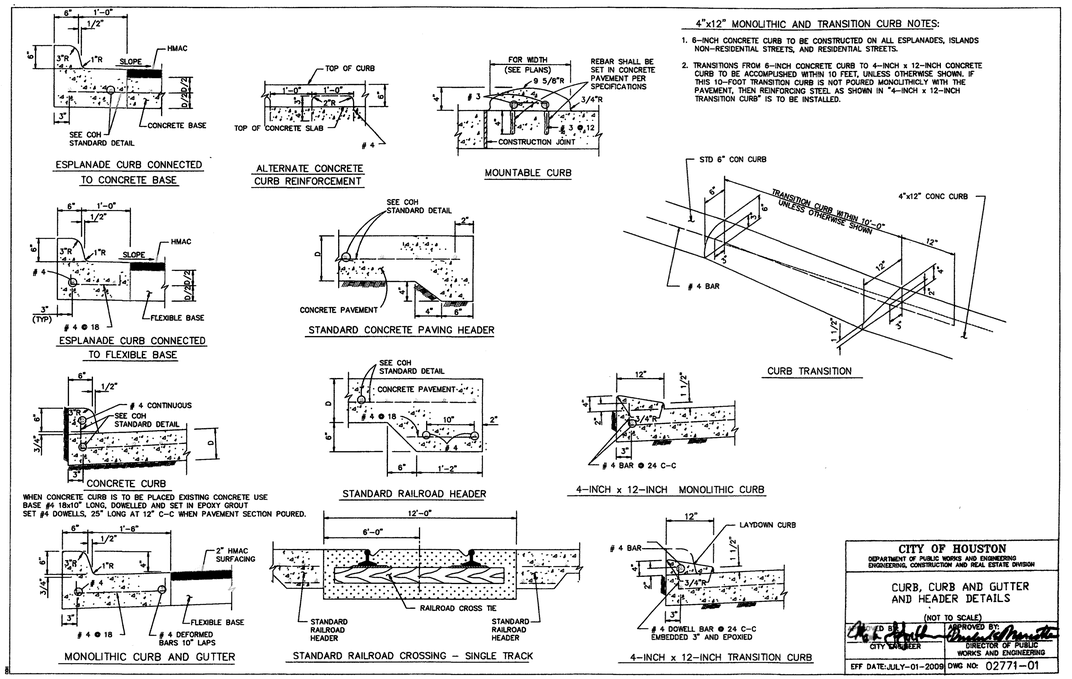
C.ENG. FILE #: C17-575
DETAILED BY: CA
DESIGNED BY: CA
CHECKED BY: CA
APPROVED BY: CA
PAGE TITLE:

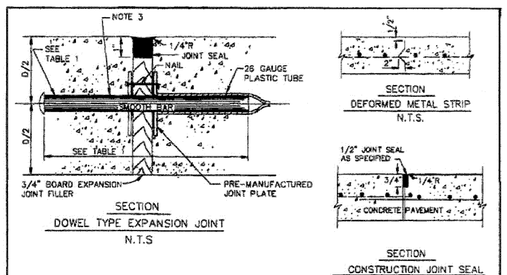
STORM, SEWER AND WATER LINE DETAILS

SHEET NO.:

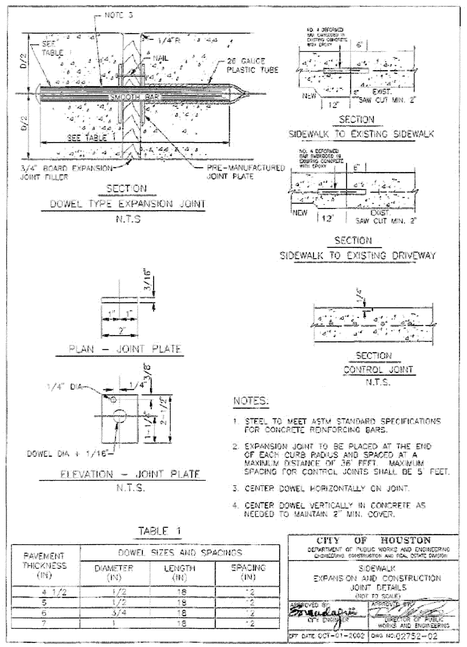
C4.1



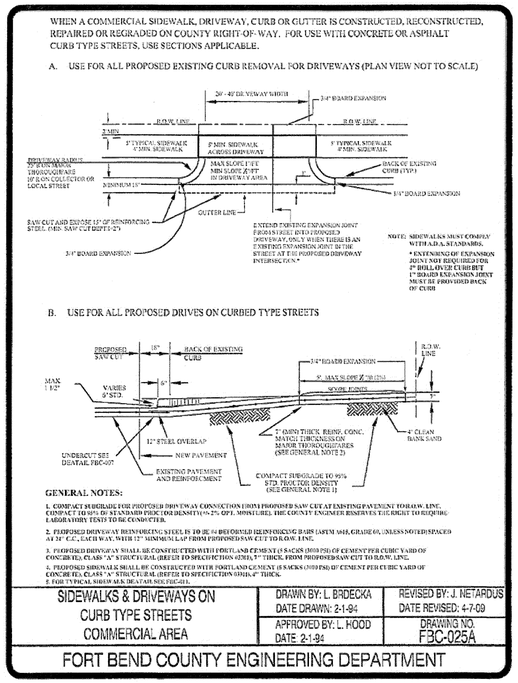


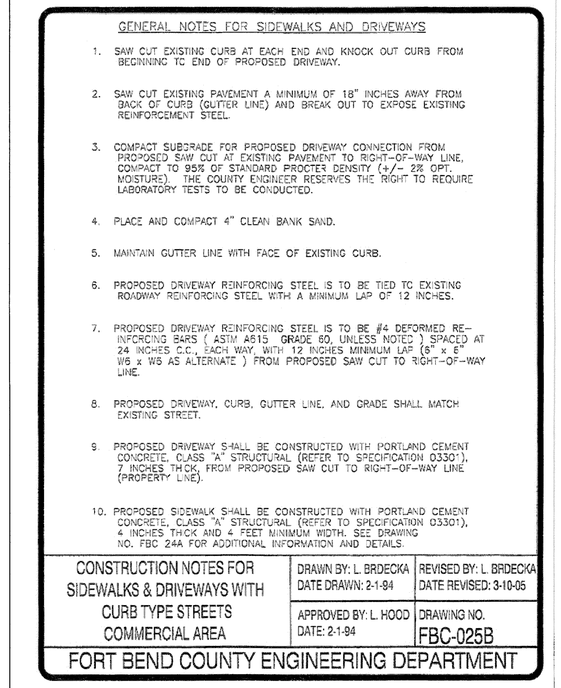


PAVEMENT THICKNESS (IN)	DOWEL SIZES AND SPACINGS		
	DIAMETER (IN)	LENGTH (IN)	SPACING (IN)
6	3/4	18	12
7	1	18	12
8	1	18	12
9	1 1/4	18	12
10	1 1/4	18	12
11	1 1/4	18	12
12	1 1/4	18	12



PAVEMENT THICKNESS (IN)	DOWEL SIZES AND SPACINGS		
	DIAMETER (IN)	LENGTH (IN)	SPACING (IN)
6	3/4	18	12
7	1	18	12
8	1	18	12
9	1 1/4	18	12
10	1 1/4	18	12
11	1 1/4	18	12
12	1 1/4	18	12





APPROVED: Chandler Ks
Development Coordinator
DATE: 4/3/18

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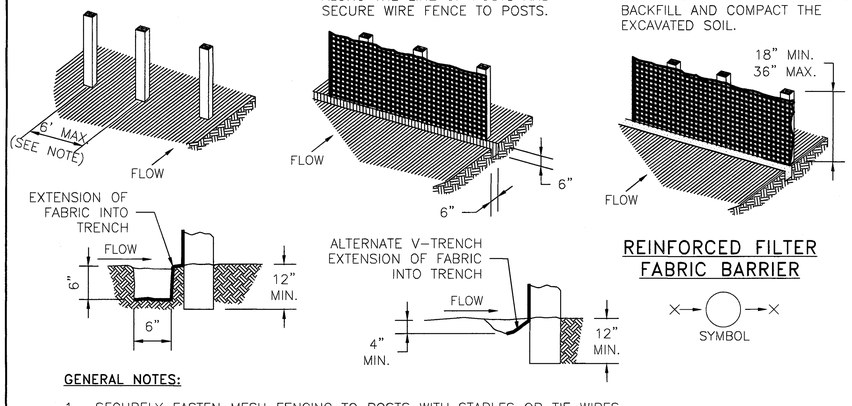
THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY CHADI AYOUB, P.E. 98170 ON 10/31/2017

REV	DATE	DESCRIPTION

HAIDER ZAMAN WEST BELLFORT WAREHOUSE BUILDINGS
15545 WEST BELLFORT BLVD, SUGAR LAND, TX 77498

C.ENG. FILE #:	C17-575
DETAILED BY:	CA
DESIGNED BY:	CA
CHECKED BY:	CA
APPROVED BY:	CA
PAGE TITLE:	PAVING AND DRIVEWAY DETAILS
SHEET NO.:	C4.2

1. SET POSTS AT REQUIRED SPACING
2. EXCAVATE A 6"x6" TRENCH UPSLOPE ALONG THE LINE OF POSTS AND SECURE WIRE FENCE TO POSTS.
3. ATTACH FILTER FABRIC TO POSTS AND EXTEND IT INTO THE TRENCH. BACKFILL AND COMPACT THE EXCAVATED SOIL.

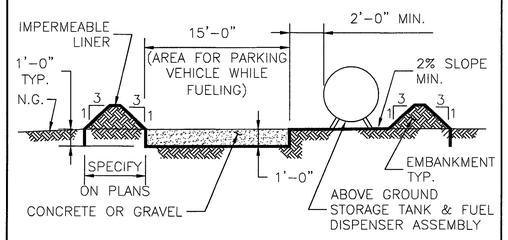


REINFORCED FILTER FABRIC BARRIER

SYMBOL

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.

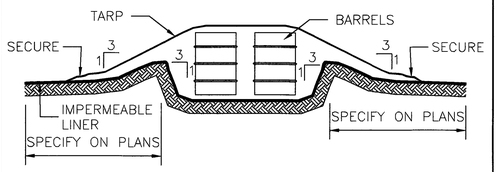


ABOVE GROUND TEMP. VEHICLE & EQUIPMENT FUELING AREA WITH TANK

TFA SYMBOL

GENERAL NOTES:

1. THE SIZE OF TANK FOUNDATION AREA DEPENDS ON THE SIZE OF ABOVE GROUND STORAGE TANK AND DISPENSER ASSEMBLY.
2. PROVIDE A MINIMUM SLOPE OF 2 % TOWARD THE SUMP PIT.
3. INSTALL IMPERMEABLE LINER AS PER MANUFACTURER'S RECOMMENDATIONS.

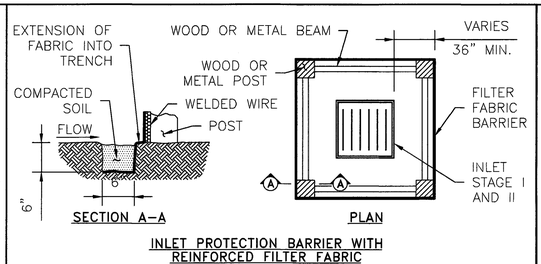


BARREL STORAGE AREA

BSA SYMBOL

GENERAL NOTES:

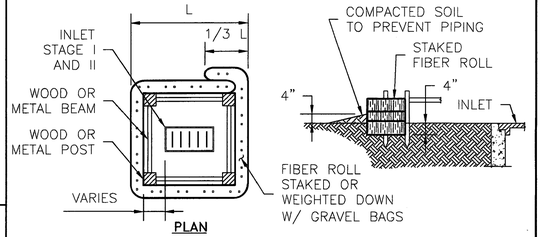
1. ALTERNATIVELY, STORE BARRELS IN AN ENCLOSED BUILDING OR SHED.
2. INSTALL IMPERMEABLE LINER AS PER MANUFACTURER'S RECOMMENDATIONS. 60 mil MINIMUM.
3. CONSTRUCT BERMED AREA WITH VOLUME GREATER THAN OR EQUAL TO 110% VOLUME OF BARRELS.



SECTION A-A

PLAN

INLET PROTECTION BARRIER WITH REINFORCED FILTER FABRIC



PLAN

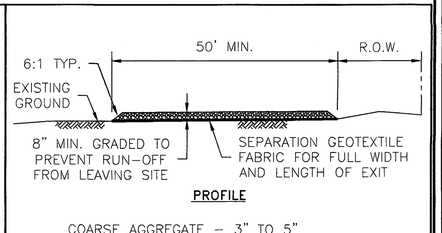
INLET PROTECTION BARRIER WITH FILTER ROLLS

GENERAL NOTES:

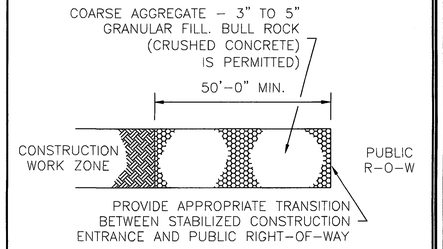
1. FIBER ROLLS WILL BE UTILIZED ONLY WHEN SITE CONDITIONS DO NOT PERMIT THE USE OF FILTER FABRIC BARRIER, AND AS APPROVED BY THE ENGINEER.

INLET PROTECTION BARRIERS FOR STAGE I INLETS

IPB SYMBOL



PROFILE



PLAN

STABILIZED CONSTRUCTION ACCESS

SC-1 SYMBOL

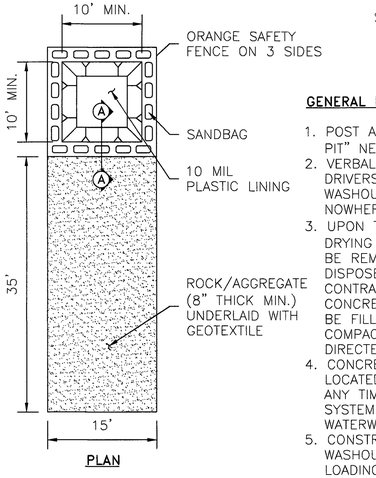
GENERAL NOTES:

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. MINIMUM 14' WIDTH FOR ONE WAY TRAFFIC AND 20' WIDTH FOR TWO WAY TRAFFIC.

SECTION A-A

CONCRETE TRUCK WASHOUT AREA

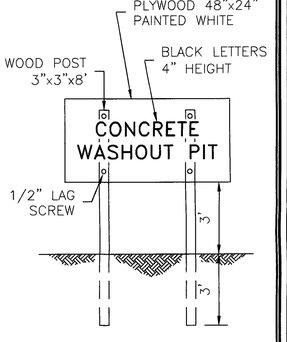
CTW SYMBOL



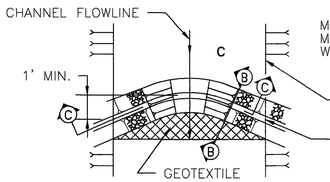
PLAN

GENERAL NOTES:

1. POST A SIGN READING "CONCRETE WASHOUT PIT" NEXT TO THE PIT.
2. VERBALLY INSTRUCT THE CONCRETE TRUCK DRIVERS WHERE THE PIT IS AND TO WASHOUT THEIR TRUCKS IN THE PIT AND NOWHERE ELSE.
3. UPON THE CONCRETE SETTING UP (CURING, DRYING OUT), THE CONCRETE WASTE SHALL BE REMOVED FROM THE PROJECT SITE AND DISPOSED OF PROPERLY BY THE CONTRACTOR. AFTER REMOVAL OF THE CONCRETE WASTE, THE WASHOUT PIT SHALL BE FILLED WITH CLEAN FILL MATERIAL AND COMPACTED TO IN-SITU CONDITIONS, OR AS DIRECTED BY THE PROJECT SPECIFICATIONS.
4. CONCRETE WASHOUT PITS SHALL NOT BE LOCATED DIRECTLY ADJACENT TO, NOR AT ANY TIME DRAIN INTO THE STORM SEWER SYSTEM OR ANY OTHER SWALE, DITCH, OR WATERWAY.
5. CONSTRUCT ENTRY ROAD AND BOTTOM OF WASHOUT AREA TO SUPPORT EXPECTED LOADINGS FROM TRUCKS EQUIPMENT.



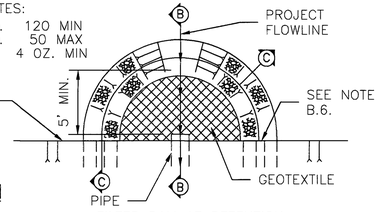
SIGN DETAIL (OR EQUIVALENT)



IN-CHANNEL FILTER DAM PLAN

GEOTEXTILE NOTES:

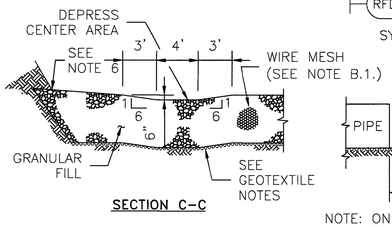
MIN. AOS	SIEVE NO.	120 MIN
MAX. AOS	SIEVE NO.	50 MAX
WEIGHT	OZ/SY	4 OZ. MIN



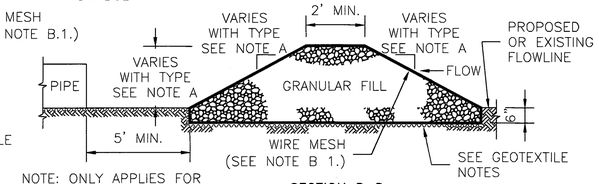
FILTER DAM AT DETENTION BASIN OUTFALL PIPE PLAN

FILTER DAM

RFD-TYPE SYMBOL



SECTION C-C



NOTE: ONLY APPLIES FOR DETENTION BASIN OUTFALL PIPE PROTECTION.

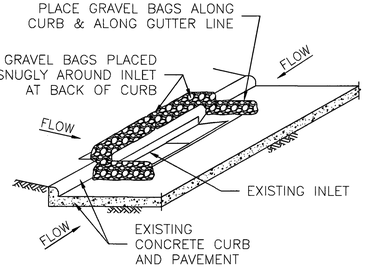
SECTION B-B

A. TYPES OF FILTER DAMS

1. TYPE 1 (NON-REINFORCED)
   a. HEIGHT - 18-24 INCHES. MEASURE VERTICALLY FROM EXISTING GROUND TO TOP OF FILTER DAM.
   b. TOP WIDTH - 2 FEET (MINIMUM)
   c. SLOPES - 2:1 (MAXIMUM).
2. TYPE 2 (REINFORCED).
   a. HEIGHT - 18-36 INCHES. MEASURE VERTICALLY FROM EXISTING GROUND TO TOP OF FILTER DAM.
   b. TOP WIDTH - 2 FEET (MINIMUM).
   c. SLOPES - 2:1 (MAXIMUM).
3. TYPE 3 (REINFORCED)
   a. HEIGHT - 36-48 INCHES. MEASURE VERTICALLY FROM EXISTING GROUND TO TOP OF FILTER DAM.
   b. TOP WIDTH - 2 FEET (MINIMUM).
   c. SLOPES - 3:1 (MAXIMUM).
4. TYPE 4 (GABION)
   a. HEIGHT - 30 INCHES (MINIMUM). MEASURE VERTICALLY FROM EXISTING GROUND TO TOP OF FILTER DAM.
   b. TOP WIDTH - 2 FEET (MINIMUM).
5. TYPE 5. AS SHOWN ON THE PLANS.

B. CONSTRUCT FILTER DAMS ACCORDING TO THE FOLLOWING CRITERIA UNLESS SHOWN OTHERWISE ON THE PLANS.

1. TYPE 2 AND 3 FILTER DAMS: SECURE WITH 20 GAUGE GALVANIZED WOVEN WIRE MESH WITH 1 INCH DIAMETER HEXAGONAL OPENINGS.
2. PLACE GRANULAR FILL ON THE WIRE MESH TO HEIGHT AND SLOPES SHOWN ON PLANS OR AS SPECIFIED BY THE ENGINEER.
   a. 3-5 INCHES FOR ROCK FILTER DAM TYPES 1, 2 AND 4.
   b. 4-8 INCHES FOR ROCK FILTER DAM TYPE REFER TO GRANULAR FILL IN SPECIFICATION SECTION No. 02378 RIPRAP AND GRANULAR FILL.
3. FOLD WIRE MESH AT UPSTREAM SIDE OVER GRANULAR FILL AND TIGHTLY SECURED TO ITSELF ON THE DOWNSTREAM SIDE USING WIRE TIES OR HOG RINGS.
4. IN STREAMS: SECURE OR STAKE MESH TO STREAM BED PRIOR TO AGGREGATE PLACEMENT.
5. SEE HCFCD SPECIFICATION SECTION NO. 02364-FILTER DAMS.
6. EMBED ONE FOOT MINIMUM INTO SLOPE AND RAISE ONE FOOT HIGHER THAN CENTER OF DEPRESSED AREA AT SLOPE.



INLET PROTECTION BARRIERS FOR STAGE II INLETS

IPB-II SYMBOL

GENERAL NOTES:

1. REMOVE SEDIMENT DEPOSIT WHEN THE SEDIMENT HAS ACCUMULATED TO ONE-THIRD THE HEIGHT OF THE BARRIER.
2. GRAVEL BAGS SHALL NOT BLOCK THROAT OF INLET UNLESS DIRECTED BY ENGINEER.

NO.	REVISIONS	DATE	NAME
1	UPDATED DEPARTMENT NAME	2/17/15	RS

HARRIS COUNTY ENGINEERING DEPARTMENT

CONSULTANT LOGO/INFORMATION

FOR INTERIM REVIEW ONLY

DOCUMENT INCOMPLETE: NOT INTENDED FOR CONSTRUCTION, BIDDING, OR PERMIT PURPOSES

ENGINEER: SEAL
P.E. SERIAL No.
DATE:

PROJECT TITLE:

DRAWN BY: JDZ		HCED STANDARD
CK'D BY: NR	SHEET DESCRIPTION: STORM WATER POLLUTION	29
SCALE: NONE	PREVENTION PLAN DETAILS	SHEET NO: /
DATE:	APPROVED BY:	

APPROVED: _____ for Development Coordinator

DATE: 4/13/18

12440 OXFORD PARK DR. SUITE B-103 HOUSTON, TX 77082
Tel: 281.584.0800 Fax: 281.584.0801
info@cengcon.com www.cengcon.com
C.ENG LICENSED ENGINEERS
TX FIRM REGISTRATION #: F-9671

STATE OF TEXAS · CHADI AYOUB · 98170 · LICENSED PROFESSIONAL ENGINEER

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY CHADI AYOUB, P.E. 98170 ON 12/31/2017

REV	DATE	DESCRIPTION

HAIDER ZAMAN WEST BELLFORT WAREHOUSE BUILDINGS

15545 WEST BELLFORT BLVD, SUGAR LAND, TX 77498

C.ENG. FILE #: C17-575
DETAILED BY: CA
DESIGNED BY: CA
CHECKED BY: CA
APPROVED BY: CA
PAGE TITLE:

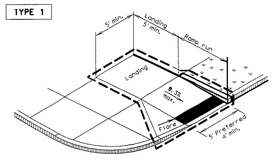
SWPPP DETAILS

SHEET NO.:

C4.3

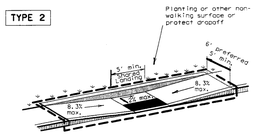
h:\!!! ceng_10-07-17 !!!\in_progress_ceng\c17-0575-0 (15545 west bellfort - reserve o)\rev.0\civil\c17-575_11-02-17.dwg

TYPE 1



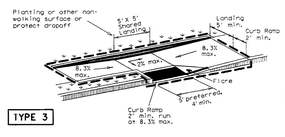
PERPENDICULAR CURB RAMP

TYPE 2

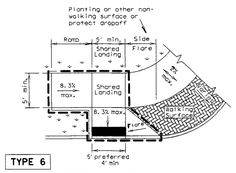


PARALLEL CURB RAMP
(Use only where water will not pond in the landing.)

TYPE 3

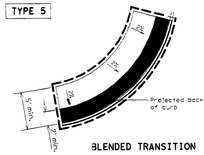


TYPE 6



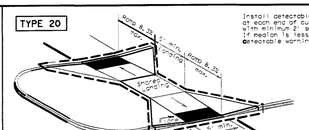
COMBINATION CURB RAMPS

TYPE 5



BLENDED TRANSITION

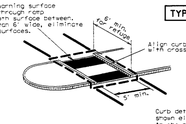
TYPE 20



CURB RAMPS AT MEDIAN ISLANDS

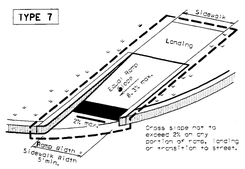
Install detectable warning surface at each end of cut-through ramp with minimum 2' smooth surface between. If median is less than 6' wide, eliminate detectable warning surfaces.

TYPE 21



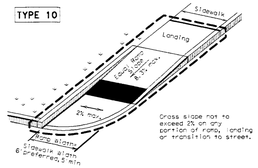
Curb details are shown elsewhere in the plans.

TYPE 7



(Sidewalk set back from curb)

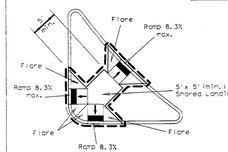
TYPE 10



(Sidewalk adjacent to curb)

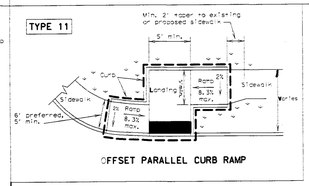
DIRECTIONAL RAMPS WITHIN RADIUS

TYPE 22



COMBINATION ISLAND RAMPS

TYPE 11



OFFSET PARALLEL CURB RAMP

NOTES / LEGEND:

See General Notes on sheet 2 of 4 for more information.

Denotes planting or non-walking surface not part of pedestrian circulation path.

Ramp Limits of Payment

Detectable Warning Surface

SHEET 1 OF 4

Texas Department of Transportation | Design Division Standard

PEDESTRIAN FACILITIES CURB RAMPS

PED-12A

FILE: ped12a.dgn	DN: TxDOT	CK: RW	DW: TxDOT	CK: VP
©TxDOT March 2002	CONT	SECT	JOB	HIGHWAY
REVISIONS				
VP June 13, 2012	DIST	COUNTY		SHEET NO.

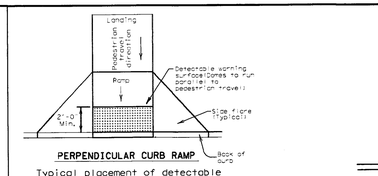
General Notes

Curb Ramps

1. Install a curb ramp or blended transition at each pedestrian street crossing.
2. All slopes shown are maximum allowable. Lesser slopes that will still drain properly should be used. Adjust curb ramp length or grade of approach sidewalks as directed.
3. The minimum sidewalk width is 5'. Where the sidewalk is adjacent to the back of curb, a 6' sidewalk width is desirable. Where a 5' sidewalk cannot be provided due to site constraints, sidewalk width may be reduced to 4' for short distances. 5'x 5' passing areas at intervals not to exceed 200' are required.
4. Landings shall be 5'x 5' minimum with a maximum 2% slope in any direction.
5. Maneuvering space at the bottom of curb ramps shall be a minimum of 4'x 4' wholly contained within the crosswalk and wholly outside the parallel vehicular travel path.
6. Maximum allowable cross slope on sidewalk and curb ramp surfaces is 2%.
7. Provide flared sides where the pedestrian circulation path crosses the curb ramp. Flared sides shall be sloped at 10% maximum, measured parallel to the curb. Returned curbs may be used only where pedestrians would not normally walk across the ramp, either because the adjacent surface is planted, substantially obstructed, or otherwise protected.
8. Additional information on curb ramp location, design, light reflective value and texture may be found in the current edition of the Texas Accessibility Standards (TAS) and 16 TAC 68.102.
9. To serve as a pedestrian refuge area, the median should be a minimum of 6' wide, measured from back of curbs. Medians should be designed to provide accessible passage over or through them.
10. Small channelization islands, which do not provide a minimum 5'x 5' landing at the top of curb ramps, shall be cut through level with the surface of the street.
11. Crosswalk dimensions, crosswalk markings and stop bar locations shall be as shown elsewhere in the plans. At intersections where crosswalk markings are not required, curb ramps shall align with theoretical crosswalks unless otherwise directed.
12. Handrails are not required on curb ramps. Provide curb ramps wherever an accessible route crosses (penetrates) a curb.
13. Curb ramps and landings shall be constructed and paid for in accordance with Item 531 "Sidewalks".
14. Place concrete at a minimum depth of 5" for ramps, flares and landings, unless otherwise directed.
15. Provide a smooth transition where the curb ramps connect to the street.
16. Curbs shown on sheet 1 within the limits of payment are considered part of the curb ramp for payment, whether it is concrete curb, gutter, or combined curb and gutter.
17. Existing features that comply with TAS may remain in place unless otherwise shown on the plans.

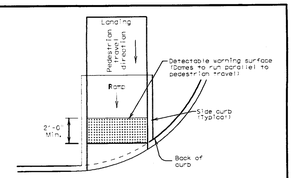
Detectable Warning Material

18. Curb ramps must contain a detectable warning surface that consists of raised truncated domes complying with Section 705 of the TAS. The surface must contrast visually with adjoining surfaces, including side flares. Furnish and install an approved cast-in-place dark brown or dark red detectable warning surface material adjacent to uncolored concrete, unless specified elsewhere in the plans.
19. Detectable Warning Materials must meet TxDOT Departmental Materials Specification DMS 4350 and be listed on the Material Producer List. Install products in accordance with manufacturer's specifications.
20. Detectable warning surfaces must be slip resistant and not allow water to accumulate.
21. Detectable warning surfaces shall be a minimum of 24" in depth in the direction of pedestrian travel, and extend the full width of the curb ramp or landing where the pedestrian access route enters the street.
22. Detectable warning surfaces shall be located so that the edge nearest the curb line is at the back of curb. Align the rows of domes to be perpendicular to the grade break between the ramp run and the street. Detectable warning surfaces may be curved along the corner radius.
23. Shaded areas on Sheet 1 of 4 indicate the approximate location for the detectable warning surface for each curb ramp type.



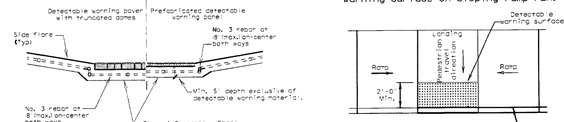
PERPENDICULAR CURB RAMP

Typical placement of detectable warning surface on sloping ramp run.

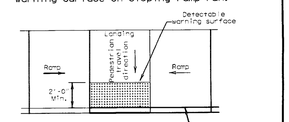


DIRECTIONAL CURB RAMP

Typical placement of detectable warning surface on sloping ramp run.



SECTION: CURB RAMP AT DETECTABLE WARNING



PARALLEL CURB RAMP

Typical placement of detectable warning surface on landing at street edge.

DETECTABLE WARNINGS

Detectable Warning Pavers

24. Furnish detectable warning paver units meeting all requirements of ASTM C-936, C-33. Lay in a two by two unit basket weave pattern or as directed.
25. Lay full-size units first followed by closure units consisting of at least 25 percent of a full unit. Cut detectable warning paver units using a power saw.

Sidewalks

26. Provide clear ground space at operable parts, including pedestrian push buttons. Operable parts shall be placed within one or more reach ranges specified in TAS 308.
27. Place traffic signal or illumination poles, ground boxes, controller boxes, signs, drainage facilities and other items so as not to obstruct the pedestrian access route or clear ground space.
28. Street grades and cross slopes shall be as shown elsewhere in the plans.
29. Changes in level greater than 1/4 inch are not permitted.
30. The least possible grade should be used to maximize accessibility. The running slope of sidewalks and crosswalks within the public right of way may follow the grade of the parallel roadway. Where a continuous grade greater than 5% must be provided, handrails may be desirable to improve accessibility. Handrails may also be needed to protect pedestrians from potentially hazardous conditions. If provided, handrails shall comply with TAS 505.
31. Handrail extensions shall not protrude into the usable landing area or into intersecting pedestrian routes.
32. Driveways and turnouts shall be constructed and paid for in accordance with Item "Intersections, Driveways and Turnouts". Sidewalks shall be constructed and paid for in accordance with Item, "Sidewalks".
33. Sidewalk details are shown elsewhere in the plans.

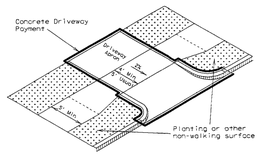
SHEET 2 OF 4

Texas Department of Transportation | Design Division Standard

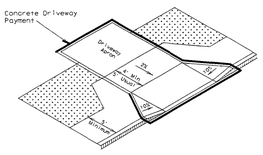
PEDESTRIAN FACILITIES CURB RAMPS

PED-12A

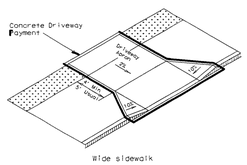
FILE: ped12a.dgn	DN: TxDOT	CK: RW	DW: TxDOT	CK: VP
©TxDOT March 2002	CONT	SECT	JOB	HIGHWAY
REVISIONS				
VP June 13, 2012	DIST	COUNTY		SHEET NO.



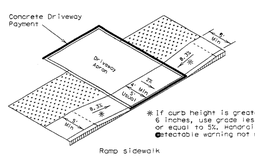
Setback sidewalk



Apron offset sidewalk



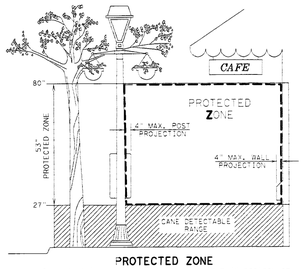
Wide sidewalk



※ If curb height is greater than 6 inches, use grade less than or equal to 5%, handrail and detectable warning not required.

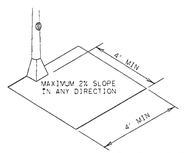
Ramp sidewalk

SIDEWALK TREATMENT AT DRIVEWAYS

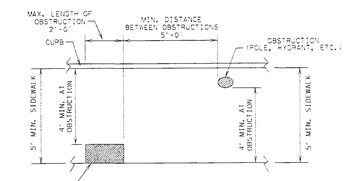


PROTECTED ZONE

In pedestrian circulation area, maximum 4" projection for post or wall mounted objects between 27" and 80" above the surface.



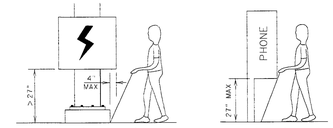
CLEAR GROUND SPACE ADJACENT TO PEDESTRIAN PUSH BUTTON



PLAN VIEW

PLACEMENT OF STREET FIXTURES

(ITEMS NOT INTENDED FOR PUBLIC USE. MINIMUM 4' x 4' CLEAR GROUND SPACE REQUIRED AT PUBLIC USE FIXTURES.)



DETECTION BARRIER FOR VERTICAL CLEARANCE < 80"

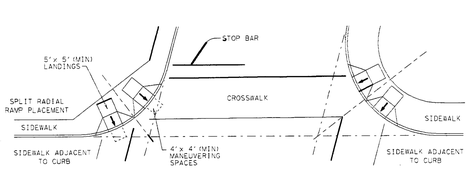
SHEET 3 OF 4

Texas Department of Transportation | Design Division Standard

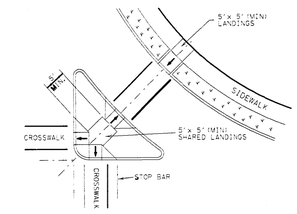
PEDESTRIAN FACILITIES CURB RAMPS

PED-12A

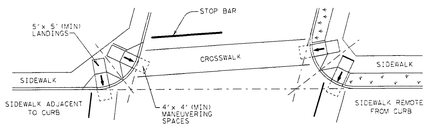
FILE: ped12a.dgn	DN: TxDOT	CK: RW	DW: TxDOT	CK: VP
©TxDOT March 2002	CONT	SECT	JOB	HIGHWAY
REVISIONS				
VP June 13, 2012	DIST	COUNTY		SHEET NO.



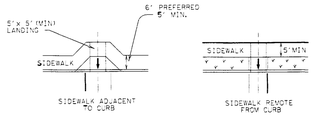
SKEWED INTERSECTION WITH "LARGE" RADIUS



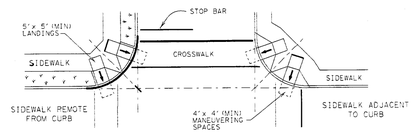
AT INTERSECTION W/FREE RIGHT TURN & ISLAND



SKEWED INTERSECTION WITH "SMALL" RADIUS



MID-BLOCK PLACEMENT PERPENDICULAR RAMPS



NORMAL INTERSECTION WITH "SMALL" RADIUS

TYPICAL CROSSING LAYOUTS

SHEET 4 OF 4

Texas Department of Transportation | Design Division Standard

PEDESTRIAN FACILITIES CURB RAMPS

PED-12A

FILE: ped12a.dgn	DN: TxDOT	CK: RW	DW: TxDOT	CK: VP
©TxDOT March 2002	CONT	SECT	JOB	HIGHWAY
REVISIONS				
VP June 13, 2012	DIST	COUNTY		SHEET NO.

APPROVED: _____ Development Coordinator

DATE: 4-13-18

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HOUSTON, TX 77082
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www.cengcon.com

C.ENG
LICENSED ENGINEERS
TX FIRM REGISTRATION #: F-9811

STATE OF TEXAS
CHADI AYOUB
98170
LICENSED PROFESSIONAL ENGINEER

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY CHADI AYOUB, P.E. 98170 ON 10/31/2017.

REV	DATE	DESCRIPTION

HAIDER ZAMAN WEST BELLFORT WAREHOUSE BUILDINGS

15545 WEST BELLFORT BLVD, SUGAR LAND, TX 77498

C.ENG. FILE #: C17-575
DETAILED BY: CA
DESIGNED BY: CA
CHECKED BY: CA
APPROVED BY: CA

PAGE TITLE:

TXDOT PED-12A STANDARD DETAILS

SHEET NO.:

C4.4

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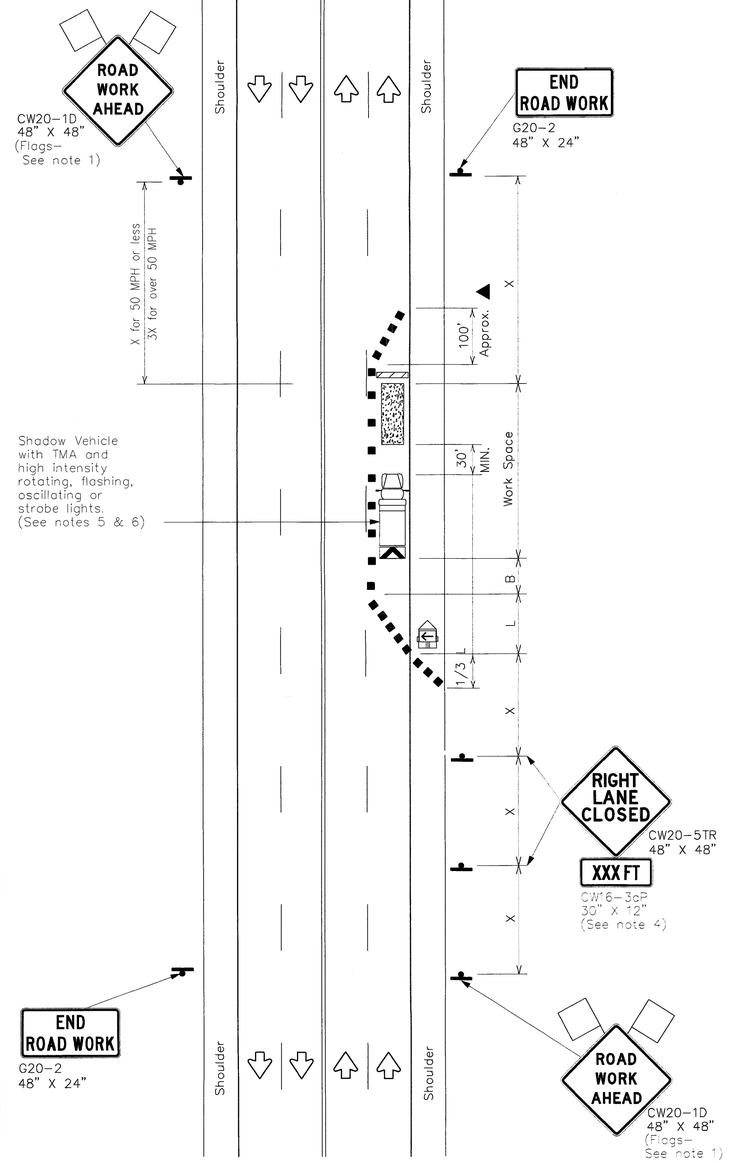
DATE:
FILE:

NOTE:

POSTED SPEED LIMIT IS 40 MPH

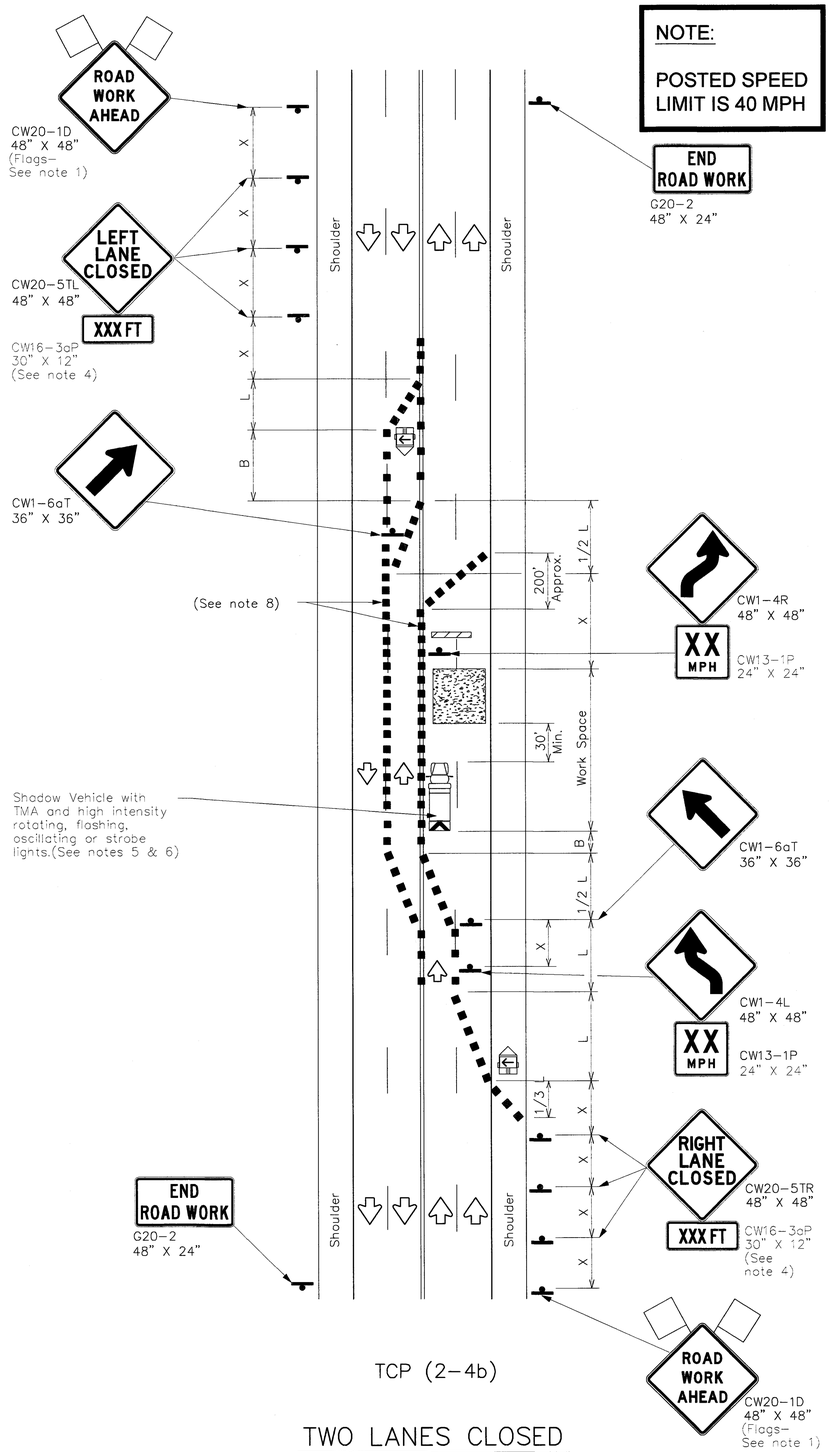


TCP (2-4a)

ONE LANE CLOSED

NOTE:

POSTED SPEED LIMIT IS 40 MPH



TCP (2-4b)

TWO LANES CLOSED

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

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

* Conventional Roads Only

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

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

GENERAL NOTES

1. Flags attached to signs where shown, are REQUIRED.
2. All traffic control devices illustrated are REQUIRED, except those denoted with the triangle symbol may be omitted when stated elsewhere in the plans, or for routine maintenance work, when approved by the Engineer.
3. The downstream taper is optional. When used, it should be 100 feet minimum length per lane.
4. For short term applications, when post mounted signs are not used, the distance legend may be shown on the sign face rather than on a CW16-3aP supplemental plaque.
5. A Shadow Vehicle with a TMA should be used anytime it can be positioned 30 to 100 feet in advance of the area of crew exposure without adversely affecting the performance or quality of the work. If workers are no longer present but road or work conditions require the traffic control to remain in place, Type 3 Barricades or other channelizing devices may be substituted for the Shadow Vehicle and TMA.
6. Additional Shadow Vehicles with TMAs may be positioned in each closed lane, on the shoulder or off the paved surface, next to those shown in order to protect a wider work space.

TCP (2-4a)

7. If this TCP is used for a left lane closure, CW20-5TL "LEFT LANE CLOSED"signs shall be used and channelizing devices shall be placed on the centerline to protect the work space from opposing traffic with the arrow board placed in the closed lane near the end of the merging taper.

TCP (2-4b)

8. For shorter durations where traffic is directed over a yellow centerline, channelizing devices which separate two-way traffic should be spaced on tapers at 20' or 15' if posted speeds are 35 mph or slower, and for tangent sections, at 1/2(S) where S is the speed in mph. This tighter devices spacing is intended for the area of conflicting markings, not the entire work zone.

For construction or maintenance contract work, specific project requirements for shadow vehicles can be found in the project GENERAL NOTES for Item 502, Barricades, Signs and Traffic Handling.

Texas Department of Transportation
Traffic Operations Division

TRAFFIC CONTROL PLAN LANE CLOSURES ON MULTILANE CONVENTIONAL ROADS

TCP(2-4)-12

©TxDOT December 1985	DN: TXDOT	CK: TXDOT	DW: TXDOT	CK: TXDOT
REVISIONS	CONT	SECT	JOB	HIGHWAY
8-95 2-12				
1-97	DIST	COUNTY		SHEET NO.
4-98				
3-03				
164				

1 LANE CLOSURES ARE RESTRICTED TO 9AM - 4PM ; MONDAY THROUGH FRIDAY

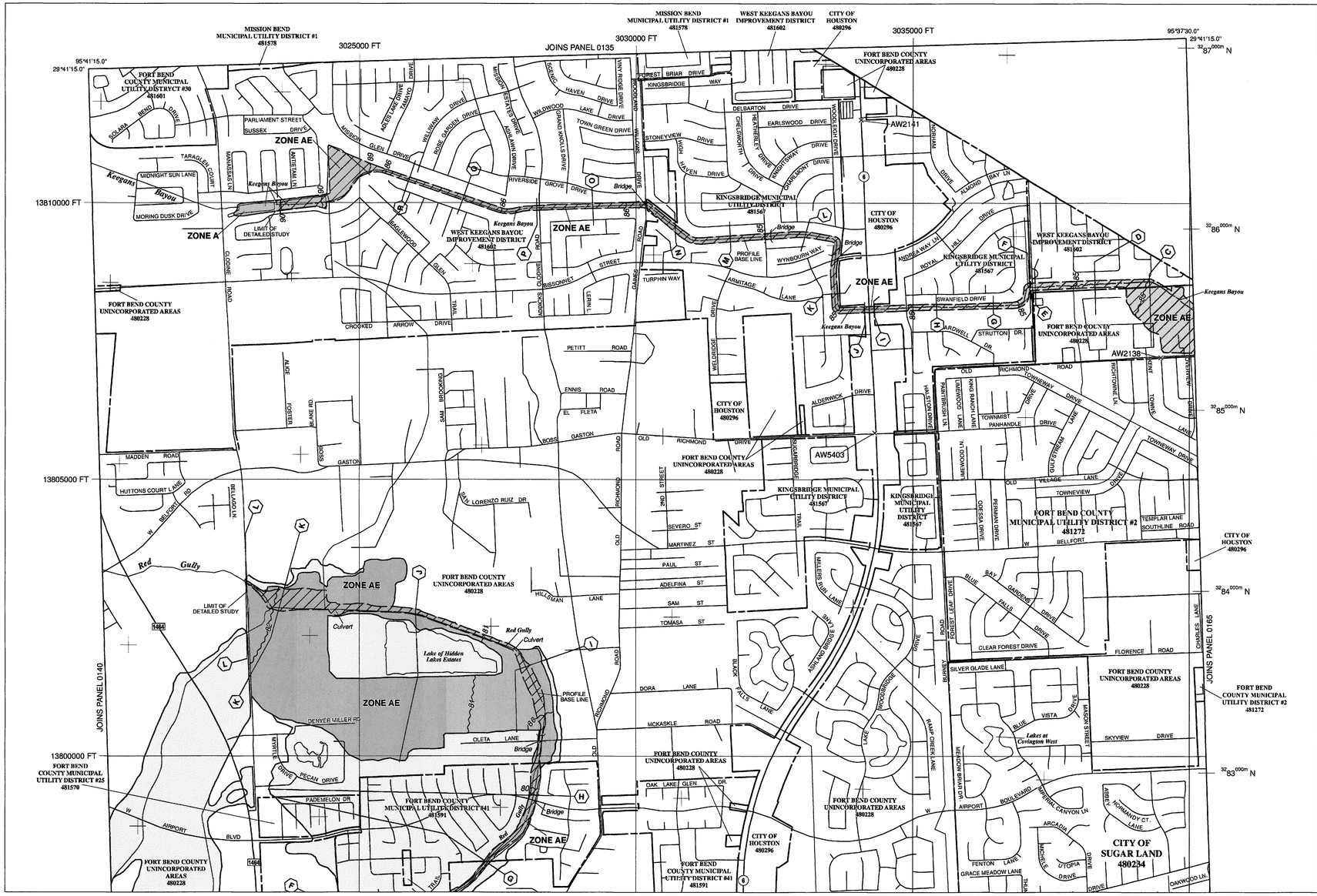
APPROVED: Casandra Hill for Development Coordinator
DATE: 4-13-18

12440 OXFORD PARK DR. SUITE B-103 HOUSTON, TX 77082
Tel: 281.584.0800 Fax: 281.584.0801
info@cengcon.com www.cengcon.com
C.ENG LICENSED ENGINEERS TX FIRM REGISTRATION #: F-9871
STATE OF TEXAS CHADI AYOUB 98170 LICENSED PROFESSIONAL ENGINEER
THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY CHADI AYOUB, P.E. 98170 ON 10/31/2017.

REV	DATE	DESCRIPTION
		-

HAIDER ZAMAN WEST BELLFORT WAREHOUSE BUILDINGS
15545 WEST BELLFORT BLVD, SUGAR LAND, TX 77498

C.ENG. FILE #: C17-573
DETAILED BY: CA
DESIGNED BY: CA
CHECKED BY: CA
APPROVED BY: CA
PAGE TITLE:
TxDOT APPROVED TRAFFIC APPROVED PLAN (TCP2-4)
SHEET NO.:
C4.5



1 FIRM MAP 48157C0145L

Scale: 1" = 1000'-0"

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NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0145L

FIRM

FLOOD INSURANCE RATE MAP

FORT BEND COUNTY, TEXAS

AND INCORPORATED AREAS

PANEL 145 OF 575

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
FORT BEND COUNTY	480228	0145	L
FORT BEND COUNTY MUNICIPAL UTILITY DISTRICT #2	481272	0145	L
FORT BEND COUNTY MUNICIPAL UTILITY DISTRICT #25	481570	0145	L
FORT BEND COUNTY MUNICIPAL UTILITY DISTRICT #30	481601	0145	L
FORT BEND COUNTY MUNICIPAL UTILITY DISTRICT #41	481591	0145	L
HOUSTON, CITY OF	480296	0145	L
KINGSBRIDGE MUNICIPAL UTILITY DISTRICT	481567	0145	L
MISSION BEND MUNICIPAL UTILITY DISTRICT #1	481578	0145	L
SUGAR LAND, CITY OF	480234	0145	L
WEST KEEGANS BAYOU IMPROVEMENT DISTRICT	481602	0145	L

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
48157C0145L

MAP REVISED
APRIL 2, 2014

Federal Emergency Management Agency

THIS IS AN OFFICIAL COPY OF THE ABOVE REFERENCED FLOOD MAP. IT WAS EXTRACTED USING F-MIT ON-LINE. THIS MAP DOES NOT REFLECT ANY AMENDMENTS OR CHANGES THAT MAY HAVE BEEN IMPLEMENTED SUBSEQUENT TO THE FOLLOWING DATE: JANUARY 22, 2016. FOR THE LATEST PRODUCT INFORMATION ABOUT THE NATIONAL FLOOD INSURANCE PROGRAM FLOOD MAPS, PLEASE CHECK THE FEMA FLOOD MAP SERVICE CENTER WEBSITE AT WWW.MSC.FEMA.GOV.

APPROVED: _____
Development Coordinator
DATE: 4/3/18

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HOUSTON, TX 77082
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info@cengcon.com
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C.ENG LICENSED ENGINEERS
TX FIRM REGISTRATION #: F-9871

STATE OF TEXAS
CHADI AYOUB
98170
LICENSED PROFESSIONAL ENGINEER

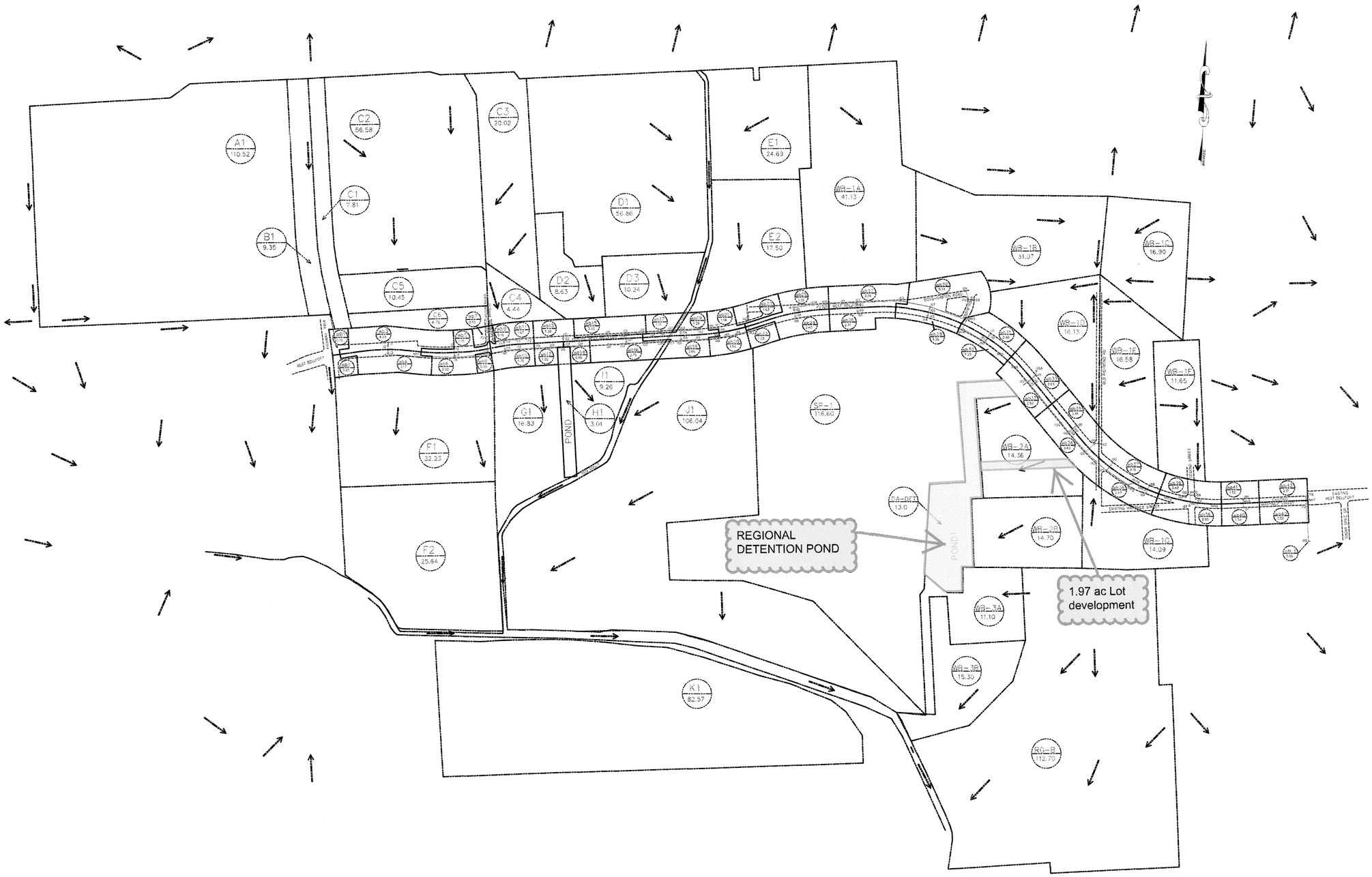
THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY CHADI AYOUB, P.E. 98170 ON 10/31/2017.

REV	DATE	DESCRIPTION

HAIDER ZAMAN WEST BELLFORT WAREHOUSE BUILDINGS

15545 WEST BELLFORT BLVD, SUGAR LAND, TX 77498

C.ENG. FILE #:	C17-575
DETAILED BY:	CA
DESIGNED BY:	CA
CHECKED BY:	CA
APPROVED BY:	CA
PAGE TITLE:	FIRM MAP 48157C0145L
SCALE:	1"=1000'-0"
SHEET NO.:	C5.0



LEGEND

EXIST. SHEET FLOW

wb42 / 2.00 — AREA LABEL / AREA AT INLET IN ACRES

NO.	DATE	REVISIONS	APP.

PROVIDENT ENGINEERS, INC.
505 JULIE RIVERS SUITE 170
SUGAR LAND, TEXAS 77478
281-313-9393

12440 OXFORD PARK DR, SUITE B-103
HOUSTON, TX 77082
Tel: 281.584.0800
Fax: 281.584.0801
info@cengcon.com
www.cengcon.com

C.ENG LICENSED ENGINEERS
TX FIRM REGISTRATION #: F-9811

STATE OF TEXAS
CHADI AYOUB
98170
LICENSED PROFESSIONAL ENGINEER

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY CHADI AYOUB, P.E. 98170 ON 10/31/2017.

REV	DATE	DESCRIPTION

WEST BELLFORT PAVING AND DRAINAGE IMPROVEMENTS FROM MARTINEZ STREET TO F.M. 1464

DRAINAGE AREA MAP

Kelly R. Kaluza & Associates, Inc.
CONSULTING ENGINEERS & SURVEYORS
3014 AVENUE I
ROSENBERG, TEXAS 77471
PH.281.341.0808 FAX.281.341.6333

STATE OF TEXAS
MICHAEL V. BAUMANN
70539
REGISTERED PROFESSIONAL ENGINEER

RECORD DRAWING
JUNE 28, 2010

SHEET No. 4 of 82

SCALE: HORIZ.: 1" = 500'	DRAWN BY:
VERT.:	APP. BY:
DATE: 1/29/08	AS./COUNTY: 9/FBC

HAIDER ZAMAN WEST BELLFORT WAREHOUSE BUILDINGS

15545 WEST BELLFORT BLVD, SUGAR LAND, TX 77498

C.ENG. FILE #:	C17-575
DETAILED BY:	CA
DESIGNED BY:	CA
CHECKED BY:	CA
APPROVED BY:	CA
PAGE TITLE:	

RELEVANT DRAINAGE AREA MAP

SHEET NO.:

C5.1

APPROVED: _____ Development Coordinator

DATE: 4/13/18

Plot date: 10/30/08 at 10:14 AM

ADDRESS : 0 WEST BELLFORT STREET
SUGAR LAND, TX 77498

BUYER : ALI CENTER INC.

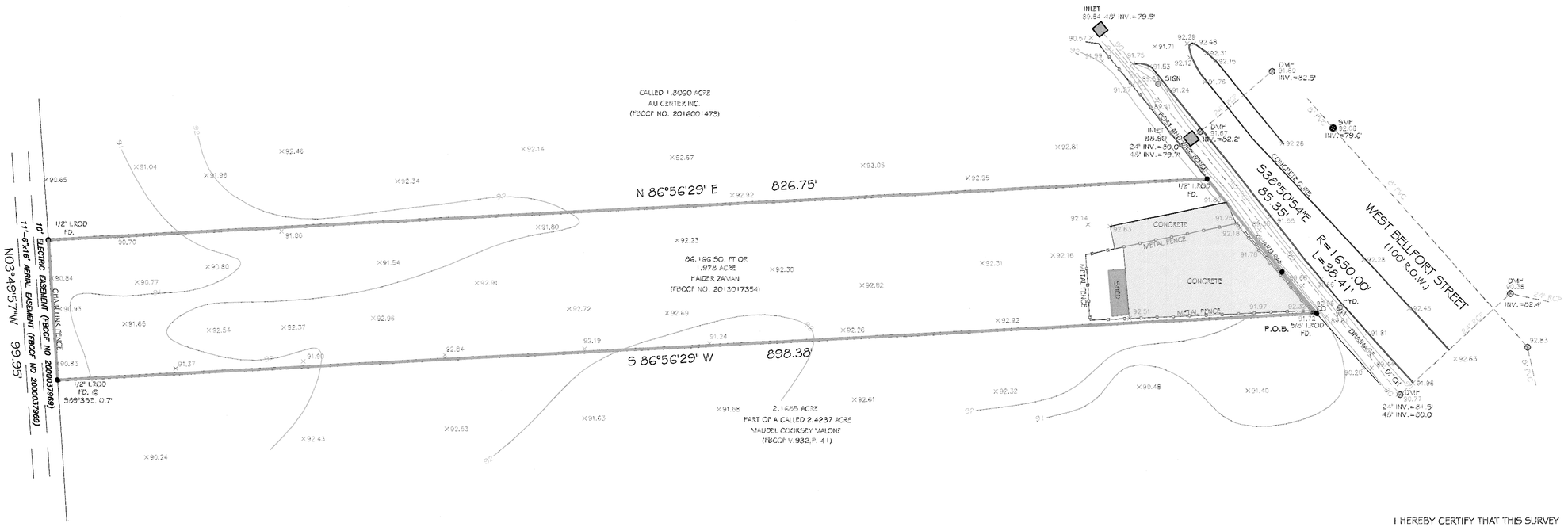
TITLE CO. : TEXAS AMERICAN TITLE COMPANY

GF NO. : 7910-17-1428

LENDER : N/A

A TOPOGRAPHIC SURVEY OF A 1.978 ACRE TRACT,
AS RECORDED UNDER FILE NO. 20130173S4 F.B.C.C.F.
LOCATED IN JOHN LEVERTON SURVEY,
ABSTRACT 402
FORT BEND COUNTY, TEXAS

SCALE: 1"=80'



PIOTR A. DEBSKI
1030 DOMINION DR.
KATY, TX 77450
832-878-6760
piod@sbcglobal.net

NOTES:

1) ALL BEARINGS SHOWN ARE REFERENCED PER GPS OBSERVATIONS.

2) ALL THE ELEVATIONS SHOWN HEREON ARE IN NAVD 1988 DATUM, 2001 ADJUSTMENT, AND ARE BASED ON HARRIS COUNTY TSARP RM04055, ELEVATION=88.81'

3) THE OPEN DRAINAGE PIPE ELEVATION IS GIVEN ON THE TOP OF PIPE OPENING

4) ALL THE CURB ELEVATIONS ARE GIVEN ON THE BOTTOM OF THE CURB 0.5' HIGH.

FLOOD INFORMATION
"THIS TRACT DOES NOT LIE WITHIN THE 100 YEAR FLOOD PLAIN AND IS IN ZONE 'X', AS PER F.E.M.A. FLOOD INSURANCE RATE PANEL NO. 48157C0145L, DATED APRIL 02 2014.

I HEREBY CERTIFY THAT THIS SURVEY HAS BEEN MADE ON THE GROUND UNDER MY SUPERVISION, AND THAT IT CORRECTLY REPRESENTS THE FACTS FOUND AT THE TIME OF THE SURVEY. THERE WERE NO ENCROACHMENTS APPARENT ON THE GROUND EXCEPT AS SHOWN HEREON.

STATE OF TEXAS
REGISTERED
PIOTR A. DEBSKI
5902
PROFESSIONAL
LAND SURVEYOR

PIOTR A. DEBSKI R.P.L.S. NO. 5902
JOB NO: 17-03-15
DATE: MARCH 07 2017

APPROVED: Development Coordinator
DATE: 4/13/18

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HOUSTON, TX 77082
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C.ENG LICENSED ENGINEERS
TX FIRM REGISTRATION #: F-10871

STATE OF TEXAS
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98170
LICENSED
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15545 WEST BELLFORT BLVD, SUGAR LAND, TX 77498

C.ENG. FILE #:	C17-575
DETAILED BY:	CA
DESIGNED BY:	CA
CHECKED BY:	CA
APPROVED BY:	CA
PAGE TITLE:	

BOUNDARY AND TOPOGRAPHIC SURVEY

SHEET NO.:

C5.2

STATE OF TEXAS

COUNTY OF FORT BEND

We, 15517 West Bellfort, an indiviual series of a Texas limited liability company, acting by and through Anis Hussain, Manager, All Center Inc., a Texas corporation, acting by and through Shahnshah Zaidi, Director, and Haider Zaman, owners hereinafter referred to as Owners of the 5.563 acre tract described in the above and foregoing map of WEST BELLFORT COMPLEX, 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 therein expressed; and do hereby bind ourselves, our heirs, successors and assigns to warrant and forever defend the title on the land so dedicated.

FURTHER, Owners have dedicated and by these presents do dedicate to the use of the public for public utility purpose forever unobstructed aerial easements. The aerial easements shall extend horizontally an additional eleven feet, six inches (11' 6") for ten feet (10' 0") perimeter ground easements or seven feet, six inches (7' 6") for fourteen feet (14' 0") perimeter ground easements or five feet, six inches (5' 6") for sixteen feet (16' 0") perimeter ground easements, from a plane sixteen feet (16' 0") above the ground level upward, located adjacent to and adjoining said public utility easements that are designated with aerial easements (U.E. and A.E.) as indicated and depicted hereon, whereby the aerial easement totals twenty one feet, six inches (21' 6") in width.

FURTHER, Owners have dedicated and by these presents do dedicate to the use of the public for public utility purpose forever unobstructed aerial easements. The aerial easements shall extend horizontally an additional ten feet (10' 0") for ten feet (10' 0") back-to-back ground easements, or eight feet (8' 0") for fourteen feet (14' 0") back-to-back ground easements or seven feet (7' 0") for sixteen feet (16' 0") back-to-back ground easements, from a plane sixteen feet (16' 0") above ground level upward, located adjacent to both sides and adjoining said public utility easements that are designated with aerial easements (U.E. and A.E.) as indicated and depicted hereon, whereby the aerial easement totals thirty feet (30' 0") in width.

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 dedicate to the public a strip of land twenty feet (20' 0") wide on each side of the center line of any and all bayous, creeks, gullies, ravines, draws, sloughs or other natural drainage courses located in said plat, as easements for drainage purposes, giving the City of Houston, Harris County, or any other governmental agency, the right to enter upon said easement at any and all times for the purpose of construction and maintenance of drainage facilities and structures.

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 shall hereby be restricted to keep such drainage ways and 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 for 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 Fort Bend County Commissioners Court on March 23, 2004, and any subsequent amendments.

IN TESTIMONY WHEREOF, the 15517 West Bellfort, an individual series of Texas limited liability company, Ali Center Inc., a Texas corporation has caused these presents to be signed by Anis Hussain, its Manager, and Shahnshah Zaidi, its Director, thereunto authorized, this _____ day of _____, 2017.

WITNESS my hand in the city of Houston, Texas, this _____ day of _____, 2017.

15517 West Bellfort, an individual series of a
Texas limited Liability company and
Ali Center, Inc., a Texas corporation

By:_____
Anis Hussain
Manager

By:_____
Shahnshah Zaidi
Director

By:_____
Haider Zaman
Owner

STATE OF TEXAS

COUNTY OF FORT BEND

BEFORE ME, the undersigned authority, on this day personally appeared Anis Hussain, known to me to be the person whose name is subscribed to the foregoing instrument and acknowledged to me that he executed the same for the purposes and considerations therein expressed and in the capacity therein and herein stated, and as the act and deed of said corporation.

GIVEN UNDER MY HAND AND SEAL OF OFFICE,
this _____ day of _____, 2017.

_____
Notary Public in and for the
State of Texas
Print Name:_____
My Commission expires:_____

STATE OF TEXAS

COUNTY OF FORT BEND

BEFORE ME, the undersigned authority, on this day personally appeared Shahnshah Zaidi, known to me to be the person whose name is subscribed to the foregoing instrument and acknowledged to me that he executed the same for the purposes and considerations therein expressed and in the capacity therein and herein stated, and as the act and deed of said corporation.

GIVEN UNDER MY HAND AND SEAL OF OFFICE,
this _____ day of _____, 2017.

_____
Notary Public in and for the
State of Texas
Print Name:_____
My Commission expires:_____

STATE OF TEXAS

COUNTY OF FORT BEND

BEFORE ME, the undersigned authority, on this day personally appeared Haider Zaman, known to me to be the person whose name is subscribed to the foregoing instrument and acknowledged to me that he executed the same for the purposes and considerations therein expressed.

GIVEN UNDER MY HAND AND SEAL OF OFFICE,
this _____ day of _____, 2017.

_____
Notary Public in and for the
State of Texas
Print Name:_____
My Commission expires:_____

I, Piotr A. Debski, am registered under the laws of the State of Texas to practice the profession of surveying and hereby certify that the above subdivision is true and accurate; was prepared from an actual survey of the property made under my supervision on the ground; that, except as shown all boundary corners, angle points, points of curvature and other points of reference have been marked with iron (or other objects of a permanent nature) pipes or rods having an outside diameter of not less than five eighths (5/8) inch and a length of not less than three (3) feet; and that the plat boundary corners have been tied to the Texas Coordinate System of 1983, south central zone.

STATE OF TEXAS · REGISTERED · PIOTR A. DEBSKI · 5902 · PROFESSIONAL · LAND SURVEYOR

_____
Piotr A. Debski
Texas Registration No. 5902

This is to certify that the Planning Commission of the City of Houston, Texas, has approved this plat and subdivision of WEST BELLFORT COMPLEX in conformance with the laws of the State of Texas and the ordinances of the City of Houston, as shown hereon, and authorized the recording of this plat this _____, day of _____, 2017.

By:_____ (or) By:_____
Martha L. Stein, Chair — M. Sonny Garza, Vice Chairman

By:_____
Patrick Walsh, P.E.
Secretary

We, Prosperity Bank, owner and holder of a lien against the property described in the plat known as WEST BELLFORT COMPLEX, said lien being evidenced by instrument of record in the Clerk's File No. 2016015151 of the O.P.R.O.R.P. of Fort Bend County, Texas, do hereby in all things subordinate our interest in said property to the purposes and effects of said plat and the dedications and restrictions shown herein to said subdivision plat and we hereby confirm that we are the present owner of said lien and have not assigned the same nor any part thereof.

By:_____
Print Name:_____
Representative of Prosperity Bank

STATE OF TEXAS

COUNTY OF HARRIS

BEFORE ME, the undersigned authority, on this day personally appeared _____, known to me to be the person whose name is subscribed to the foregoing instrument and acknowledged to me that they executed the same for the purposes and considerations therein expressed and in the capacity therein and herein stated, and as the act and deed of said corporation.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this
_____ day of _____, 2017.

_____
Notary Public in and for the State of Texas

Print Name:_____

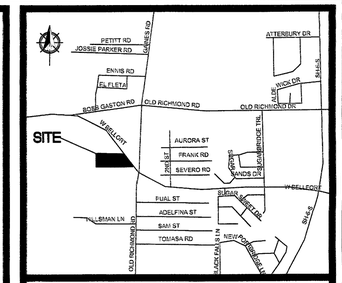
My Commission expires:_____

I, Chadi Ayoub, a Professional Engineer registered in the State of Texas do hereby certify that this plat meets all requirements of Fort Bend County to the best of my knowledge.

Print Name: _____, P.E.
Registered Professional Engineer No. 98170

SCALE:
1"=40'

40 20 0 40 80



KEY MAP 527Y — **Vicinity Map** not to scale

I, Richard Stolleis, P.E., Fort Bend County Engineer, do hereby certify that the plat of this subdivision complies with all of 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 or parent stream or on any other area or subdivision within the watershed.

_____
Richard Stolleis, P.E.
Fort Bend County Engineer

Approved by the Commissioner's Court of Fort Bend County, Texas, this _____ day of _____, 2017.

_____ Vincent M. Morales, Jr., Precinct 1, County Commissioner
_____ Grady Prestage, Precinct 2, County Commissioner
_____ Robert E. Hebert, County Judge
_____ W.A. "Andy" Myers, Precinct 3, County Commissioner
_____ James Patterson, Precinct 4, County Commissioner

I, Laura Richard, County Clerk in and for Fort County, hereby certify that the foregoing instrument with its certificate of authentication was filed for recordation in my office on _____, 20__, at _____ o'clock __.M., in plat number _____, of the Plat Records of Fort Bend County, Texas.

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

_____
Laura Richard
County Clerk for
Fort Bend County, Texas

By:_____
Deputy

NOTES:

1. This survey has not been tied to the official City of Houston Survey monumentation system in accordance with Ordinance No. 69-1978, because a City survey marker has not been established within 2000 ft.
2. Unless otherwise indicated, the building line (B.L.), whether one or more, shown on the subdivision plat are established to evidence compliance with the applicable provisions of Chapter 42, Code of Ordinances, City of Houston, Texas, in effect at the time this plat was approved, which may be amended from time to time.
3. All property to drain into the drainage easement only through and approved drainage structure.
4. The top of all floor slabs shall be a minimum of **93.50** 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.
5. The drainage system for the subdivision is designated in accordance with the Fort Bend County Manual which allows street ponding with intense rainfall events.
6. This property lies within Houston Extraterritorial Jurisdiction.
7. There are no existing pipelines or pipeline easements within the limits of the proposed subdivision.
8. Vertical Control - City of Houston Survey marker No. 040455 located on the Southwest corner of bridge. Approximately 0.15 miles North from the intersection of Bissonnet Street and Gaines Road. Elevation = 88.81 feet, NAVD 1988, 2001 Adjustment.
9. The platted area is located within Zone "X" outside the 100-year flood plain, based on FEMA Flood Insurance Rate Map Panel 48157C0145L, effective April 2, 2014.
10. The Lighting Zone code is L3.
11. The Coordinates shown hereon are Texas South Central Zone No. 4204 State Plane Grid Coordinates (NAD83) and may be brought to surface by applying the following combined scale of 0.99988025.
12. Sidewalks shall be built or caused to be built not less than 5 feet in width on both sides of dedicated rights-of-way within said plat an on contiguous rights-of-way of all perimeter rods surrounding said plat, in accordance with A.D.A Sidewalks may be a minimum of 4 feet in width when placed in front of single family residential lots with approval of Ft. Bend County Engineer.

WEST BELLFORT COMPLEX

A SUBDIVISION OF A 5.563 ACRE TRACT OF LAND
SITUATED IN THE JOHN LEVERTON SURVEY
ABSTRACT 402
FORT BEND COUNTY, TEXAS

3 RESERVES 1 BLOCK 0 LOTS

OWNERS:

15517 WEST BELLFORT, AN INDIVIDUAL SERIES OF
A TEXAS LIMITED LIABILITY COMPANY
15517 WEST BELLFORT, SUGAR LAND, TEXAS 77498
281-561-6161

ALI CENTER, INC., A TEXAS CORPORATION
15505 WEST BELLFORT, SUGAR LAND, TEXAS 77498
832-868-0430

HAIDER ZAMAN
15734 WEST BELLFORT, SUGAR LAND, TEXAS 77498
281-561-6161

DATE: OCTOBER, 2017 SCALE: 1" = 40'

OWENS MANAGEMENT SYSTEMS, LLC
P.O. BOX 88331
HOUSTON, TEXAS 77288
713-843-8333

SURVEYOR
PIOTR A. DEBSKI
1030 DOMINION DR.
KATY, TEXAS 77450

APPROVED: _____ Development Coordinator
DATE: 4/3/18

12440 OXFORD PARK DR. SUITE B-103
HOUSTON, TX 77082
Tel: 281.584.0800
Fax: 281.584.0801
info@cengcon.com
www.cengcon.com

C.ENG LICENSED ENGINEERS
TX FIRM REGISTRATION #: 20071

STATE OF TEXAS · CHADI AYOUB · 98170 · LICENSED · PROFESSIONAL ENGINEER

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY CHADI AYOUB, P.E. 98170 ON 10/31/2017.

REV	DATE	DESCRIPTION

HAIDER ZAMAN WEST BELLFORT WAREHOUSE BUILDINGS

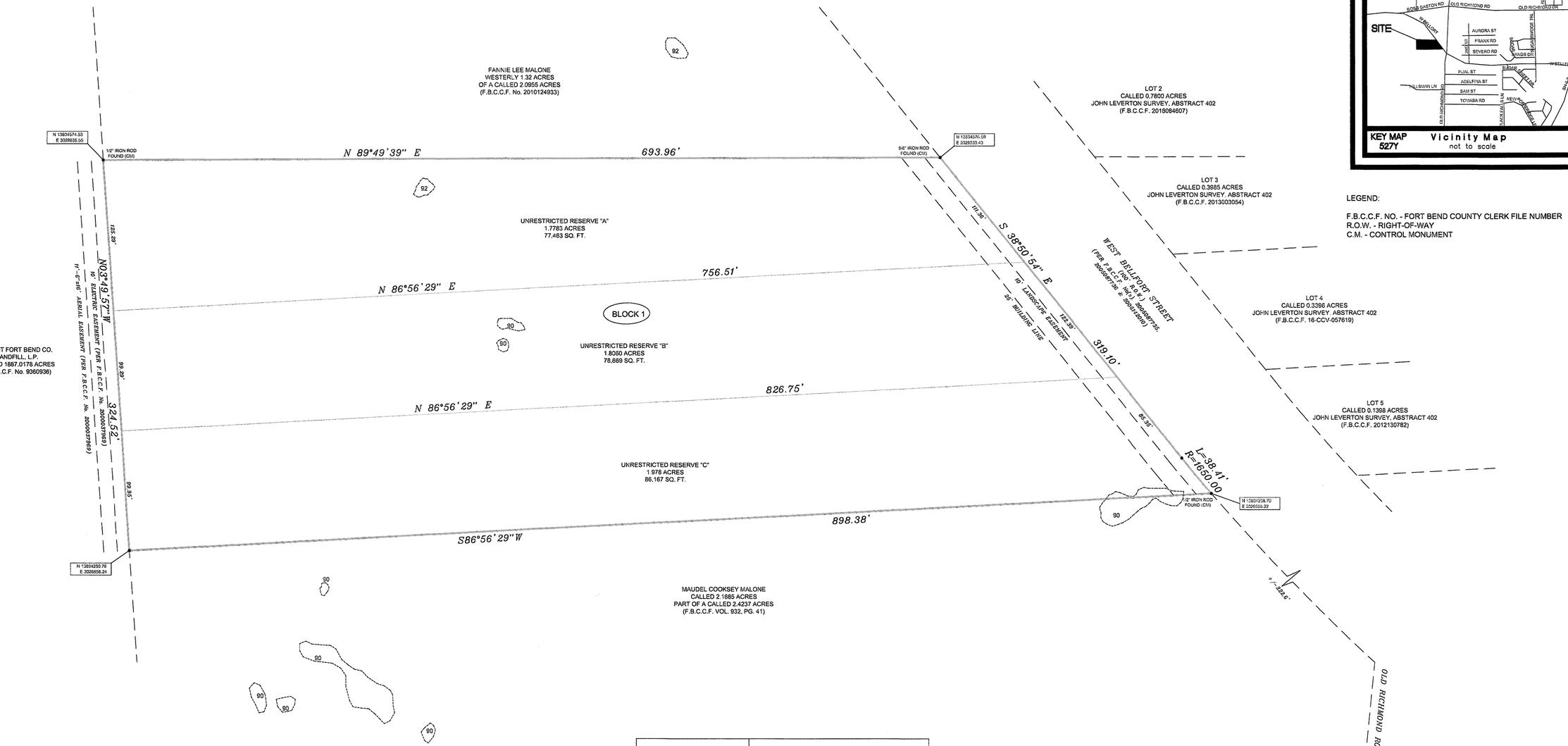
15545 WEST BELLFORT BLVD, SUGAR LAND, TX 77498

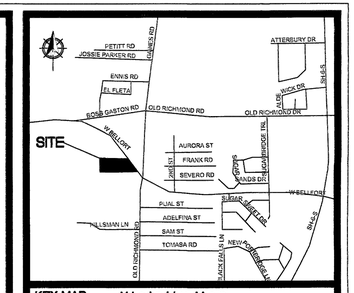
C.ENG. FILE #:	C17-575
DETAILED BY:	CA
DESIGNED BY:	CA
CHECKED BY:	CA
APPROVED BY:	CA
PAGE TITLE:	

PLAT:
WEST BELLFORT COMPLEX
1 OF 2

SHEET NO.:

C5.3





LEGEND:

F.B.C.C.F. NO. - FORT BEND COUNTY CLERK FILE NUMBER
R.O.W. - RIGHT-OF-WAY
C.M. - CONTROL MONUMENT

SCALE:
1"=40'
40 20 0 40 80

DISTRICT NAMES	
WCID	FT BEND FRESH WATER DISTRICT 2
MUD	---------
LID	---------
DID	FT BEND DRAINAGE DISTRICT
SCHOOL	FT BEND ISD
FIRE	---------
IMPACT FEE AREA	---------
CITY OR CITY ETJ	HOUSTON ETJ
UTILITIES CO.	CENTERPOINT

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SURVEYOR
PIOTR A. DEBSKI
1030 DOMINION DR.
KATY, TEXAS 77450

APPROVED: _____
for Development Coordinator
DATE: 4-13-18

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C.ENG
LICENSED ENGINEERS
TX FIRM REGISTRATION #: F-9951

STATE OF TEXAS
CHADI AYOUB
98170
LICENSED PROFESSIONAL ENGINEER

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY CHADI AYOUB, P.E. 98170 ON 10/31/2017.

REV	DATE	DESCRIPTION

HAIDER ZAMAN WEST BELLFORT WAREHOUSE BUILDINGS

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PLAT:
WEST BELLFORT COMPLEX
2 OF 2

SHEET NO.:

C5.4