

Document 00910

ADDENDUM NO. 2

Date of Addendum: July 29, 2016

PROJECT NAME: Sims North Wastewater Treatment Plant (WWTP) Waste and Debris
Offloading and Disposal Station

PROJECT NO: WBS No. R-000265-0081-4

BID DATE: August 4, 2016 (There is no change to the Bid Date.)

FROM: J. Timothy Lincoln, P.E., City Engineer
City of Houston, Department of Public Works and Engineering
611 Walker Street
Houston, Texas 77002

Attn: Iraj M. Ranjbar, Project Manager

TO: Prospective Bidders

This Addendum forms a part of the Bidding Documents and will be incorporated into the Contract documents, as applicable. Insofar as the original Project Manual and Drawings are inconsistent, this Addendum governs.

This Addendum uses the change page method: remove and replace or add pages, or Drawing sheets, as directed in the change instructions below. Change bars (|) are provided in the outside margins of pages from the Project Manual to indicate where changes have been made; no change bars are provided in added Sections. Reissued Drawing Sheets show the Addendum number below the title block and changes in the Drawing are noted by a revision mark and enclosed in a revision cloud.

ADDENDUM NO. 2

CHANGES TO PROJECT MANUAL

CHANGES TO BIDDING FORMS

1. Document 00410B-Bid Form – Replace Document 00410B with revised attached Document 00410B.

CHANGES TO SPECIFICATIONS

2. Specifications, Section 00821 – Wage Scale for Building Construction:

Delete this section in its entirety.

3. Specifications, Section 01110 – Summary of Work

Replace this section in its entirety.

4. Specifications, Section 13160 - Debris Dewatering Filter Media System:

- a. Paragraph 2.05, Item A.:

Change text “model number 3520 MFWD” to “model number 3039R” in the first sentence.

- b. Paragraph 2.05, Item B.3:

Delete this sentence in its entirety and replace with the following text:

“3. Rollover Protective Structure meeting ASAE, SAE and OSHA standards”

- c. Paragraph 2.05, Item B.4

Change “37.1 engine horsepower” to “38.7 engine horsepower”.

- d. Paragraph 2.05, Item C.3

Delete this paragraph in its entirety and replace with the following text:

“3. Model number H165 Loader”

CHANGES TO DRAWINGS

5. Sheet G-3 (Sheet No.3 of 41) – General Construction Notes:

Replace Sheet G-3 in its entirety.

6. Sheet C-1 (Sheet No. 9 of 41) – Utility Area Plan:

Replace this sheet in its entirety.

7. Sheet C-4 (Sheet No. 12 of 41) – Storm Sewer Plan & Profile:

Add the following note:

“1. USE CLASS III RCP IN LIEU OF ALL CLASS V RCP SHOWN ON THIS DRAWING.”

8. Sheet M-1 (Sheet No. 15 of 41) – Filter & Roll-Off Area Mechanical Plan:

Add the following notes:

“3. PROVIDE SYSTEM 108 COATING FOR NEW CONCRETE AS FOLLOWS: COAT THE CONCRETE SLAB BENEATH THE DRAIN TILES AND COAT THE CONCRETE SIDE WALLS UP TO THE TOP OF THE LUMBER PIECES ABOVE THE DRAIN TILES.

4. EMBEDDED PLATES SHALL BE 3/8” THICK.”

Change Detail “303” Callout to Detail “304”.

Delete the following note on the top right corner:

“2/NPW/STL UP AND OVER TO THE WASH-DOWN HOSE STATION BETWEEN THE TWO CENTER BAYS. PROVIDE PIPE SUPPORT, DETAIL 343 SHOWN ON PAGE M-5.”

9. Sheet M-2 (Sheet No. 16 of 41) – Filter & Roll-Off Area Mechanical Sections:

SECTION A:

Delete grade beam shown at Column 1. See Structural Sheets for location of Column 1

Delete grade beam shown at Column 7. See Structural Sheets for location of Column 7.

Add the following note at base of Column 1:

“REFER TO STRUCTURAL SHEETS FOR PIER DESIGN.”

Add the following note at base of Column 7:

“REFER TO STRUCTURAL SHEETS FOR PIER DESIGN.”

10. Sheet M-3 (Sheet No. 17 of 41) – Filter & Roll-Off Area Mechanical Sections:

SECTION C:

Delete grade beam shown at Column 1. See structural sheets for location of Column 1.

Delete grade beam shown at Column 7. See structural sheets for location of Column 7.

Add the following note at base of Column 1:

“REFER TO STRUCTURAL SHEETS FOR PIER DESIGN.”

Add the following note at base of Column 7:

“REFER TO STRUCTURAL SHEETS FOR PIER DESIGN.”

11. Sheet M-5 (Sheet No. 19 of 41) – Mechanical Details

STANDARD CLEANOUT DETAIL ON SERVICE LEAD on the top left corner:

Add Note “DETAIL 110 - “8” CLEANOUT”.

12. Sheet S-1 (Sheet No. 20 of 41) – General Structural Notes

Replace this sheet in its entirety.

13. Sheet S-5 (Sheet No. 24 of 41) – Plan @ EL. +27'-0” TOW:

Slab reinforcing notes:

Change “#8 @ 8” O.C. LONG. BARS (TYP.)” to “#8 @ 8” O.C. LONG. BARS T&B (TYP.)”.

Change “#6 @ 12” O.C. TRANS. BARS (TYP.)” to “#6 @ 12” O.C.

TRANS. BARS T&B (TYP.)”.

Grade Beam GB-2 at Line B:

Change width from “1'-0” to “2'-0””.

14. Sheet S-6 (Sheet No. 25 of 41) – Roof Framing Plan

Replace this sheet in its entirety.

15. Sheet S-8 (Sheet No. 27 of 41) – Transverse Elevations:

ELEVATION @COL. 1&7, below roof:

Change roof beam dimension from “W24x104” to “W24x62”.

16. Sheet S-9 (Sheet No. 28 of 41) – Concrete Details:

Replace this sheet in its entirety.

17. Sheet S-10 (Sheet No. 29 of 41) – Pile Detail:

Replace this sheet in its entirety.

18. Sheet E-3 (Sheet No. 36 of 41) – Partial One-Line Diagram:

Replace this sheet in its entirety.

19. Sheet E-5 (Sheet No. 38 of 41) – Lighting Site Plan:

Replace this sheet in its entirety.

20. Sheet E-7 (Sheet No. 40 of 41) – Typical Electrical Details:

Replace this sheet in its entirety.

CLARIFICATIONS

1. Drawing S-9 indicates “Compacted Soil” beneath the 2’ thick slab. Is this soil to be native soil or is select or structural fill to be used? What soil material is to be used for backfill around the pier cap pedestals?

Response: Compacted soil to be 95% proctor. See General Notes #3 on Drawing S-1. Note 3 calls for select fill.

2. Drawing S-2 shows the pier top of the 30" pier at lines C and D to be EL. 21'-0". Drawing S-9, section J shows the top of these piers at EL. 15'-0".

Response: Top of Pier should be @ 15'-0 per Foundation Notes # 3 except at Col. Lines 1 & 7. Top of Pier Elevation is 21'-0.

3. Drawing C-6, Concrete Pavement Details shows a typical roadway with curbs. Drawing C-2 shows curbs between points 1-4, 3-5, 35-37 and sawtooth curb between 37-50. Is this the only curbs required? Is all the remaining paving edge without curb?

Response: Yes, these are the only curbs required on the project. Remaining paving edge does not have curb.

4. Are any paving expansion joints and contraction joints required other than what is noted on drawing C-6.

Response: No. The paving expansion joints and contraction joints are adequate as shown.

5. Drawings C-1 and C-2 show three double lines running north and south across the slab. These double lines correspond with column lines 3, 4 and 5 on drawing S-4. What do these lines represent on drawings C-1 and C-2?

Response: The three double lines shown on Drawing C-1 and C-2 are grade beams under the slab except in the section between columns C and E where they are cell divider walls.

6. Drawing S-9, the 24"*24" pedestals is on top of the drill piers. Is it feasible to raise the top of the drill piers up to the bottom of the grade beams or bottom of the slab?

Response: No.

7. Please specify paving thickness?

Response: Please refer to the bid form. Paving thickness is listed in description of bid item.

8. It appears that the natural soils are to be used under the new slab of the

debris handling station. Please specify what material should be used as structural fill under the slab.

Response: See General Notes #3 on Drawing S-1.

9. Note 25 on sheet S-1 states that the pier lengths are guidance only and that contractor is to penetrate into bedrock. The borings go to a depth of 65 with no sign of rock present. We assume the engineer has designed the structure with adequate pier depths? If so please add an extra unit item for extra pier depth the contractors have no way to guess at what depth the rock might be in Houston, TX.

Response: Contractor is not to guess length of piers. See General Note 26 on Drawing S-1. Extra pier length bid items are provided in the bid form in addendum.

10. Is there a known flow line of the 84" sanitary sewer that is next to the North West corner of the debris handling station?

Response: Yes. According to Drawing C-1, the 84" sanitary sewer is labeled on the northeast corner of the debris handling station.

11. There is no specification on the metal canopy. Is it to be galvanized or painted? Can you please provide a spec for this structure?

Response: See General Note 16 on Drawing S-1.

12. Where the head trace panel to be placed? These items are not shown on the electrical drawings. Please show mounting location, conduit, and wire schedule for this item.

Response: There is no heat trace panel on this project.

13. Can aluminum hand rail be used in lieu of fabricated steel railings as shown on the drawings?

Response: No. The galvanized steel handrail matches other handrails at the plant.

14. Details on S-9 show water stop and details on sheet S-14 do not. Is water stop required at the construction joints?

Response: Yes, water stop is required at construction joints per S-9.

15. You have included Spec section 07610 Sheet Metal Roofing we assume

for the metal canopy. In Detail .5 Roof Section sheet 30 you call out 1-1/2" type B Metal Deck. Do you want 1-1/2" type B Metal Deck with a standing seam roof on top or just the standing seam roof directly connected to the z purlins? Please clarify what we are to provide here.

Response: The 1-1/2" type B Metal Deck will be the standing seam roof connected to the z-purlins directly.

16. Drawing S-6 (sht 25), what is the roof framing running north and south in between column lines 2&3, 3&4, 4&5 and 5&6. How is this framing to be supported? This framing is not shown on drawing S-7 (sht 26)

Response: These are #4 round bars bridging between the z- purlins.

17. Drawing S-1 (sht 20), General Note 9 states "Anchor bolts, nuts and washers shall conform to ASTM A-316 stainless steel." Drawing S-10 (sht 29) Light Pole Base Details indicate galvanized anchor bolts. Are these anchor bolts to be stainless steel or galvanized?

Response: Anchor bolts called out on S-10 are specific to the light pole base only.

END OF ADDENDUM NO. 2

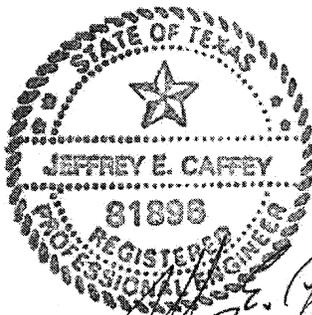
DATED:

Ravi Kaleyatodi
Ravi Kaleyatodi, P.E., CPM
Senior Assistant Director

IMR E.N.
Department of Public Works and
Engineering

RK:EN:IMR:LW:sdd

END OF DOCUMENT



Document 00410B

BID FORM – PART B

1.0 TOTAL BID PRICE HAS BEEN CALCULATED BY BIDDER, USING THE FOLLOWING COMPONENT PRICES AND PROCESS (PRINT OR TYPE NUMERICAL AMOUNTS):

A. STIPULATED PRICE:

\$N/A

(Total Bid Price; minus Base Unit Prices, Extra Unit Prices, Cash Allowances and All Alternates, if any)

B. BASE UNIT PRICE TABLE:

Item No.	Spec Ref.	Base Unit Item Description	Unit of Measure	Est. Qty	Unit Price (this column controls)	Total in Figures
1	01502	Mobilization	LS	1	\$80,000 ⁽¹⁾	\$80,000
2	01570	Straw Bale Barrier	LF	150		
3	01570	Filter Fabric Fence	LF	1650		
4	02260	Trench safety system for trench excavations	LF	250		
5	02220	Removing and Disposing of Existing Structures, Equipment and Materials; Debris Dewatering Station.	LS	1		
6	02221	Remove/Dispose Storm Pipe 24-inch dia.	LF	220		
7	02221	Remove/Dispose Inlets all sizes/depth	EA	1		
8	02221	Removing and Disposing of Concrete Pavements (including all thickness, w/ or w/o asphalt, including base & subgrade, w/ or w/o curb, all depths)	SY	130		
9	02951	Pave Repair/Replacement with Base Material/Conc. Surface	SY	130		
10	02336	Lime Stabilized Paving Subgrade 8-inch	SY	2500		
11	02751	Reinforced Concrete Pavement; 12 inch thick including dumpster area	SY	2500		
12	DIV 00-16	Pre-cast Concrete Trench Drain Basins with Galvanized Steel Grate rated HS20 loading	LF	40		
13	02771	6-inch Doweled Curb	LF	180		
14	02631	24-inch Diameter Storm Sewer by open cut	LF	460		
15	02631	6-inch Diameter PVC Storm Sewer by open cut	LF	40		

Item No.	Spec Ref.	Base Unit Item Description	Unit of Measure	Est. Qty	Unit Price (this column controls)	Total in Figures
16	02082	Type C manhole for 42-inch diameter and smaller sewers	EA	7		
17	02633	Type A, grate inlet (Pre Cast)	EA	2		
18	02633	Type E inlet (Pre Cast)	EA	2		
19	02633	Headwall including flared wings (Pre Cast)	EA	1		
20	02531	12 inch sanitary sewer, by open cut from Trench Drains to Lift Station Manhole	LF	350		
21	02531	8 inch sanitary sewer, by open cut for Debris Tile Drains to Trench Drains including cleanouts, penetrations, and appurtenances ready for operation	LF	350		
22	02531	4 inch sanitary sewer, by open cut for Debris Tile Drain risers including penetrations and appurtenances ready for operation	LF	170		
23	02082	4-Foot Diameter Precast Concrete Manholes for Sanitary Sewer	EA	4		
24	02082	Extra Depth, 4-foot dia. precast concrete manhole, sanitary sewer	VF	16		
25	02511	2 inch diameter PVC water line by open-cut. From wet connection to hose stations	LF	375		
26	02513	2-inch diameter wet connection	EA	2		
27	DIV 00-16	Galvanized Steel Dual Connection Hose Stations complete in place with all fittings, penetrations, valves, and appurtenances ready for operation	EA	4		
28	DIV 00-16	Hose racks complete in place with hose	EA	6		
29	DIV 00-16	Debris Station Structure complete in place including but not limited to, excavation and backfill, lime stabilized and compacted, structural fill, drilled shaft piers with pulled casings, and all reinforced structural concrete (not pavement) including truck ramps, dump bays and walls, filter floor and walls, splash containment wall and concrete stairs. This item includes rough grading	LS	1		
30	DIV 00-16	Waste and Debris Station equipment complete in place and operational including Dewatering Filter Tiles, Handrails, Dumpster Embed Plates and all remaining equipment, materials, and appurtenances not otherwise listed in other Bid Items complete in place and operational.	LS	1		

Item No.	Spec Ref.	Base Unit Item Description	Unit of Measure	Est. Qty	Unit Price (this column controls)	Total in Figures
31	DIV 00-16	Galvanized Steel Canopy with Columns, Steel Framing, Grout and Accessories complete in place with all appurtenances and operational.	LS	1		
32	13160	Dried Material Removal Tractor	LS	1		
33	DIV 00-16	Moveable Plastic Traffic Control Dividers	EA	12		
34	DIV 00-16	Storm Water Detention Pond including berm and rough grading complete in place.	LS	1		
35	02921	Hydromulch seeding including finish grading the site and topsoil	ACRE	1.25		
36	16111 16160 16161	Install a 150 A, 480V, 3-phase disconnect, 24 circuits 120/240 lighting panel, 25 KVA transformer at the New Debris Station, duct bank conduits and feeder wiring from Lift Station MCC and a new 150A breaker in the MCC.	LS	1		
37	16510	New pole mounted LED light fixtures in yard area (6X6X25 concrete), including wire, conduit, and ductbank	EA	2		
38	16510	LED wall mounted fixtures around the exterior of the canopy including wiring conduits, and switches	EA	6		
39	16510	LED wall and ceiling mounted fixtures under the canopy including wiring conduits and switches	EA	40		
40	16170	Receptacles, grounding system, wiring, and miscellaneous electrical items	LS	1		
41	16111	Electrical equipment installations, testing, documentation, and warranty	LS	1		
BASE UNIT PRICE TOTAL:						\$ _____

C. EXTRA UNIT PRICE TABLE:

Item No.	Spec Ref.	Base Unit Item Description	Unit of Measure	Est. Qty	Unit Price (this column controls)	Total in Figures
42	02465	Extra depth of 30-inch diameter foundation piers, including all labor, materials, casing tools, and equipment for drilling and constructing, complete in place.	VLF	50	\$ 72.00 ⁽²⁾	\$ 3,600.00 ⁽²⁾
43	02465	Extra depth of 36-inch diameter foundation piers, including all labor, materials, casing tools, and equipment for drilling and constructing, complete in place.	VLF	25	\$ 106.00 ⁽²⁾	\$ 2,650.00 ⁽²⁾
44	02465	Extra depth of 48-inch diameter foundation piers, including all labor, materials, casing tools, and equipment for drilling and constructing, complete in place.	VLF	75	\$163.00 ⁽²⁾	\$ 12,225.00 ⁽²⁾
45	02465	Extra depth of 72-inch diameter foundation piers, including all labor, materials, casing tools, and equipment for drilling and constructing, complete in place.	VLF	25	\$ 240.00 ⁽²⁾	\$ 6,000.00 ⁽²⁾
46	02318	Excavate around obstructions	CY	100	\$ 8.00 ⁽²⁾	\$ 800.00 ⁽²⁾
47	02318	Extra placement of backfill	CY	100	\$ 12.00 ⁽²⁾	\$1200.00 ⁽²⁾
48	02318	Extra placement of structural fill	CY	100	\$ 15.00 ⁽²⁾	\$ 1500.00 ⁽²⁾
49	02751	Extra concrete pavement with stabilized subgrade	SY	20	\$ 100.00 ⁽²⁾	\$ 2,000.00 ⁽²⁾
50	03315	Extra Class "A" structural concrete installed in place with all reinforcing and form work	CY	5	\$ 830.00 ⁽²⁾	\$ 4,150.00 ⁽²⁾
EXTRA UNIT PRICE TOTAL:						\$ 34,125.00 ⁽²⁾

D. CASH ALLOWANCE TABLE:

Item No.	Spec Ref.	Cash Allowance Short Title	Cash Allowance in figures (1)
51	01110	Permits	\$ 15,000
CASH ALLOWANCE TOTAL:			\$ 15,000

E. ALTERNATES TABLE: \$[N/A]

F. TOTAL BID PRICE:\$ _____

(Add Totals for Stipulated Price, Base Unit Price, Extra Unit Price, Cash Allowance, and All Alternates, if any)

2.0 SIGNATURES: By signing this Document, I agree that I have received and reviewed all Addenda and considered all costs associated with the Addenda in calculating the Total Bid Price.

Bidder: _____
(Print or type full name of your proprietorship, partnership, corporation, or joint venture.*)

****By:** _____
Signature Date

Name: _____
(Print or type name) Title

Address: _____
(Mailing)

(Street, if different)

Telephone and Fax Number: _____
(Print or type numbers)

* If Bid is a joint venture, add additional Bid Form signature sheets for each member of the joint venture.

** Bidder certifies that the only person or parties interested in this offer as principals are those named above. Bidder has not directly or indirectly entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding.

Note: This document constitutes a government record, as defined by § 37.01 of the Texas Penal Code. Submission of a false government record is punishable as provided in § 37.10 of the Texas Penal Code.

Footnotes for Tables B through E:

- (1) Fixed Unit Price determined prior to Bid. Cannot be adjusted by the Bidder.
- (2) Minimum Bid Price determined prior to Bid. Can be increased by the Bidder, but not decreased, by crossing out the Minimum and inserting revised price on the line above. **Cannot** be decreased by the Bidder.

Doc. No.	Document Title	Doc. Date
00821	Wage Scale for Building Construction	02-01-2016
00830	Trench Safety Geotechnical Information	02-01-2004
00840	Pay or Play Program Requirements	07-03-2012

ADDENDA AND MODIFICATIONS

00911	Notice of Addendum	02-01-2004
00931	Request for Information	02-01-2004

Section 01110

SUMMARY OF WORK

PART 1 GENERAL

1.01 SECTION INCLUDES

Summary of the Work including work by the City, City-Furnished Products, Contracted Work Sequence, Contractor use of Premises, special conditions for substantial completion and City occupancy.

1.02 SCOPE OF WORK

- A. For construction of all work required to construct the Sims North Waste and Debris Handling Station, complete in place, as shown on the Plans and described in the Specifications. The Work under this Contract consists of furnishing all labor, supervision, equipment, tools, materials, transportation, services, and related items necessary for the construction, completion, start-up and placing in service the Project described in the following paragraphs. Contractor shall provide testing of all systems to ensure performance in accordance with manufacturer's design and as specified herein; perform necessary adjustment as required, reporting proper functioning to OWNER; and all required start-up services to place all systems in operation.
1. Mobilize Contractor furnished equipment and facilities and set-up at the jobsite, including providing and installing the project identification sign.
 2. Provide and install straw bale barrier.
 3. Provide and install filter fabric fence.
 4. Provide and install all required storm water pollution control materials and trench safety systems during excavations.
 5. Demolish and remove the existing Debris Dewatering Station and Bar Rack down to the existing concrete slab. Plug the station drain pipe
 6. Remove 220 feet of existing buried 24-inch reinforced concrete storm sewer pipe and storm water inlet at the paved access to the New Debris Station and plug the end of pipe to remain.
 7. Contractor shall remove and dispose of all sizes/depth inlets
 8. Remove 130 square yards of existing concrete pavement to install the New Debris Station Drain Pipe to the existing plant site lift station. Restore the concrete pavement.
 9. Provide and install 130 square yards of pavement repair/replacement with base material/concrete surface.
 10. Provide and install 2500 square yards of 8-inch lime stabilized paving subgrade.
 11. Provide and install 2500 square yards of reinforced concrete pavement, 12-inch thick including dumpster area.
 12. Provide and install 40 linear feet of pre-cast concrete trench drain basins with galvanized steel grate rated HS20 loading.
 13. Provide and install 180 linear feet of 6-inch domed curb.
 14. Provide and install 460 linear feet of 24-inch diameter storm sewer by open cut.
 15. Provide and install 40 linear feet of 6-inch diameter PVC storm sewer by open cut.
 16. Provide and install 7 Type C manholes for 42-inch diameter and smaller sewers.
 17. Provide and install 2 precast Type A grate inlets.
 18. Provide and install 2 precast Type E inlets.
 19. Provide and install precast headwall including flared wings.
 20. Install 350 linear feet of 12 inch PVC drain pipe from the trench drains to the existing Plant Lift Station. This includes 4 new manholes.

SUMMARY OF WORK

21. Install 350 linear feet of 8 inch PVC drain pipe from the New Debris Station Drain Tiles to the trench drains including cleanouts, penetrations and appurtenances ready for operation.
 22. Install 170 linear feet of 4 inch PVC drain pipe from the New Debris Station Drain Tiles to the 8 inch drain headers.
 23. Install 4 of 4-foot diameter precast concrete manholes for sanitary sewer.
 24. Install 16 vertical feet of extra depth, 4-foot diameter precast concrete manhole for sanitary sewer.
 25. Install 375 linear feet of 2-inch diameter PVC water line by open-cut from wet connection to hose stations.
 26. Install 2 of 2-inch diameter wet connection.
 27. Install 4 galvanized steel hose stations complete in place with all fittings, penetrations, valves, and appurtenances.
 28. Install 6 hose racks complete in place with hose.
 29. Complete New Debris Station Structure in place including but not limited to, excavation and backfill, lime stabilized and compacted, structural fill, drilled shaft piers with pulled casings, and all reinforced structural concrete (not pavement) including truck ramps, dump bays and walls, filter floor and walls, splash containment wall and concrete stairs. This item includes rough grading.
 30. Construct and place into service a new waste and debris station including dewatering filter tiles, handrails, dumpster embed plates and all remaining equipment, materials, and appurtenances not otherwise listed in other Bid items
 31. Construct a Galvanized Steel Canopy with columns, steel framing, grout and accessories complete in place with all operational appurtenances. The Canopy shall be 54 feet by 110 feet and 25 feet over the dewater debris loading areas.
 32. Provide a Tractor to remove dried waste material from drainage tiles.
 33. Furnish 12 Moveable Plastic Traffic Control Barricades or Dividers.
 34. Construct a Storm Water Detention Pond.
 35. Apply stockpiled topsoil and hydro-mulch seeding to all disturbed soil surfaces including the Storm Water Detention Pond and Berms.
 36. Install all required power feed equipment for the New Debris Station including a 150 A, 480V, 3-phase disconnect, 24 circuits 120/240 lighting panel, 25 KVA transformer at the New Debris Station including duct bank conduits and feeder wiring from Lift Station MCC and a new 150 A breaker in the MCC.
 37. Install 2 new pole mounted LED yard lighting fixtures (6X6X25 concrete), including wire, conduit, and duct bank.
 38. Install 6 LED wall mounted lighting fixtures around the exterior of the canopy including wiring conduits and switches.
 39. Install 40 LED wall and ceiling mounted lighting fixtures under the canopy including wiring conduits and switches.
 40. Install receptacles, grounding system, wiring, and miscellaneous electrical items.
 41. Install electrical equipment installations including testing, documentation, and warranty
- B. The following shall be provided by the contractor as needed to complete the work specified. All work shall be coordinated with the OWNER'S Construction Manager.
1. Temporary facilities and controls as specified in Division 1 Section 01504.
 2. Provide quality control, material testing, field-testing, and related services in accordance with Division 1 Section 01450. This work shall be coordinated with the OWNER'S contact person
 3. Provide training of OWNER'S operation and maintenance personnel in accordance with Division 1 Section 01755. This work shall be coordinated with the OWNER'S Contact person,
 4. Field surveying required for support of construction operations.

- 5. Applicable permits, licenses and jurisdictional inspections, certificate of occupancy, and related work as necessary for OWNER to assume operation of facility.
- C. Extra Work Items
 - 1. Unit Cost line items are provided in the Bid Form for common Extra Work Items associated with this project. All Extra Work shall be coordinated with the OWNER's project manager.
- D. Cash Allowances
 - 1. Include the following specific Cash Allowances as indicated in the Bid Form:
 - a) Building Permit Allowance – This allowance to be used for reimbursement of actual Building Permit Fees.

1.03 CITY-FURNISHED PRODUCTS

- A. No items in the contract are furnished by the City. The contractor shall be responsible for repair or replacement of existing onsite facilities damaged in the construction.
- B. Contractor's Responsibilities:
 - 1. Arrange and pay for Products delivered to site.
 - 2. Receive and unload Products at the site. Inspect for completeness or damage.
 - 3. Handle, store, install, finish and test Products.
 - 4. Repair or replace items damaged during construction.

1.04 WORK SEQUENCE

- A. The need to maintain pumping of influent sewage flows at the Plant Lift Station requires that the sanitary sewer work in this contract be completed with limited down time of the pumping. Therefore, the contractor shall schedule and prioritize completion of the sanitary sewer work to minimize down-time and construction delays.
- C. For other field work coordination requirements, the contractor is referred to Section 01312 - Coordination and Meetings.

1.05 CONTRACTOR USE OF PREMISES

- A. Comply with procedures for access to the site and Contractor's use of rights-of-way as specified in Section 01145 - Use of Premises.
- B. Construction Operations: Limited to the City's rights-of-way provided by the City and areas shown or described in the Contract documents.
- C. Utility Outages and Shutdown: Provide a minimum of 48 hours notice to the City and private utility companies (when applicable), excluding weekends and holidays, in advance of required utility shutdown. Coordinate all work as required.

1.06 STREET CUT ORDINANCE – not used

1.07 WARRANTY

Comply with warranty requirements in accordance with Document 00700 - General Conditions.

1.08 ADDITIONAL CONDITIONS FOR SUBSTANTIAL COMPLETION

In addition to requirements outlined in Document 00700 – General Conditions, for Contractor to be substantially complete with the Work and call for inspection by Project Manager to confirm, the following conditions must be met or completed:

- A. All testing shall be completed and accepted by Project Manager.

SUMMARY OF WORK

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

END OF SECTION

- A. Furnish one (1) model number 3039R, compact utility tractor, as manufactured by John Deere Company. No substitutions as to make and model will be acceptable.
- B. The compact utility tractor shall be furnished with all factory furnished standard equipment items including:
 1. PowrReverser Hydrostatic transmission
 2. Fully enclosed muffler and engine
 3. Rollover Protective Structure meeting ASAE, SAE and OSHA standards.
 4. 3 cylinder, liquid cooled diesel motor-38.7 engine horsepower
- C. The following optional equipment shall also be provided:
 1. 27x8.50-15 6PR Front R3 Turf tires
 2. 41x14.0-20 4PR Rear R3 Turf tires
 3. Model number H165 Loader
 4. Backup alarm

2.06 UTILITY TRACTOR BUCKET TIPS

- A. The Debris Dewatering Filter Media System supplier shall provide one (1) polyurethane bucket tip to bolt to the front edge of the utility tractor's bucket. This bucket tip shall be molded of polyurethane with a Shore Durometer hardness reading of between 60 and 65 on the "D" scale, as measured using ASTM test method D 2240.
- B. The bucket tip shall have a steel insert molded within to provide rigidity and shall measure 6" wide by 1 ½" high by 60 inches long and have incorporated ten (10) countersunk holes to accept 3/8-16 flat head bolts and Nylok nuts. Fastening hardware for bucket tip shall be stainless steel.

Part 3 EXECUTION

3.01 INSTALLATION

- A. General: Installation shall be in accordance with the manufacturer's written instructions, provided to the Contractor, prior to delivery of the material to the jobsite. Any deviations in installation shall be gained from the manufacturer, in writing, prior to being implemented by the Contractor.

3.02 MANUFACTURER'S SERVICE REPRESENTATIVE

GENERAL CONSTRUCTION NOTES:

- CONSTRUCT WASTEWATER COLLECTION SYSTEMS, WATER LINES, STORM DRAINAGE AND STREET PAVING IN ACCORDANCE WITH THE LATEST EDITION OF THE PUBLICATIONS STANDARD CONSTRUCTION SPECIFICATIONS FOR WASTEWATER COLLECTION SYSTEMS, WATER LINES, STORM DRAINAGE AND STREET PAVING, AND STANDARD CONSTRUCTION DETAILS FOR WASTEWATER COLLECTION SYSTEMS, WATER LINES, STORM DRAINAGE AND STREET PAVING PUBLISHED BY THE CITY OF HOUSTON, DEPARTMENT OF PUBLIC WORKS AND ENGINEERING.
- THE GEOTECHNICAL INVESTIGATION FOR THIS PROJECT WAS CONDUCTED IN ACCORDANCE WITH CHAPTER 11 OF THE LATEST EDITION OF THE PUBLICATION INFRASTRUCTURE DESIGN MANUAL, PUBLISHED BY THE CITY OF HOUSTON, DEPARTMENT OF THE PUBLIC WORKS AND ENGINEERING. SOILS REPORT WAS PREPARED BY GEOTECH ENGINEERING AND TESTING REPORT NO. 14-543E, DATED OCTOBER 2015.
- UTILITIES PRESENTED ON THESE DRAWINGS ARE SHOWN BASED ON THE BEST AVAILABLE INFORMATION. CONTRACTOR SHALL VERIFY THE EXACT LOCATIONS IN THE FIELD PRIOR TO COMMENCING CONSTRUCTION. CONTRACTOR SHALL NOTIFY TEXAS ONE CALL AT 713-223-4567/811 OR 800-344-8377 AND LONE STAR NOTIFICATION CENTER AT 800-669-8344 AT LEAST 48 HOURS BEFORE PROCEEDING WITH ANY EXCAVATION. UTILITIES MARKED WITHIN THE PUBLIC RIGHT OF WAY OR IN EASEMENTS SHALL COMPLY WITH TAC TITLE 16, PART 1, CHAPTER 18, RULE §18.6 AND THE AMERICAN PUBLIC WORKS ADMINISTRATION (APWA) UNIFORM COLOR CODE.
- CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGES TO EXISTING WATER, WASTEWATER, STORM WATER LINES AND TRAFFIC CONTROL DEVICES. DAMAGES SHALL BE REPAIRED IN ACCORDANCE WITH THE CITY OF HOUSTON, DEPARTMENT OF PUBLIC WORKS AND ENGINEERING'S STANDARD CONSTRUCTION SPECIFICATIONS FOR WASTEWATER COLLECTION SYSTEM, WATER LINES, STORM DRAINAGE, AND STREET PAVING AND STANDARD CONSTRUCTION DETAILS FOR WASTEWATER COLLECTION SYSTEMS, WATER LINES, STORM DRAINAGE, AND STREET PAVING, REFERENCED ABOVE, AT NO ADDITIONAL COST.
- CONTRACTOR SHALL NOTIFY THE OFFICE OF THE CITY ENGINEER, DEPARTMENT OF PUBLIC WORKS AND ENGINEERING @ 832-394-9098 OR VIA FAX AT 832-395-4424 FOR INSPECTION AT LEAST 48 HOURS PRIOR TO COMMENCING CONSTRUCTION.
- ADEQUATE DRAINAGE SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION AND ANY DRAINAGE DITCH OR STRUCTURE DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO EXISTING CONDITIONS OR BETTER.
- CONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS TO PROTECT ROOT SYSTEMS OF SHRUBS, PLANTS AND TREES ALONG THE AREA OF EXCAVATION.
- CONTRACTOR SHALL COMPLY WITH LATEST EDITION OF OSHA REGULATIONS AND THE STATE OF TEXAS LAWS CONCERNING EXCAVATION.
- CONTRACTOR SHALL MAINTAIN A SET OF REDLINE DRAWINGS AND RECORD AS-BUILT CONDITIONS DURING CONSTRUCTION. MARK UPS SHALL INCLUDE ALL UTILITIES FOUND DURING CONSTRUCTION AND SHOW TYPE, SIZE, LOCATION AND ELEVATION. DIFFERENTIATE BETWEEN NEW AND EXISTING. THESE REDLINE MARKED UP DRAWINGS WILL BE SUBMITTED TO THE DESIGN CONSULTANT WHO WILL MAKE THE CHANGES ON THE ORIGINAL TRACINGS, LABEL EACH SHEET IN THE SET AS "RECORD DRAWINGS", AND RETURN IT TO THE OFFICE OF THE CITY ENGINEER.
- CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS, LOCATIONS, ELEVATIONS, AND CONDITION OF EXISTING FACILITIES BEFORE STARTING WORK. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPORT ANY DISCREPANCIES TO THE CITY ENGINEER.
- CONTRACTOR SHALL ASSURE THAT ALL CONSTRUCTION PERMITS HAVE BEEN OBTAINED PRIOR TO COMMENCING WORK.
- CONTRACTOR SHALL REMOVE ALL TRASH AND DEBRIS FROM SITE UPON COMPLETION OF THE PROJECT.
- CONTRACTOR SHALL IMPLEMENT INLET PROTECTION DEVICES AND REINFORCED FILTER FABRIC BARRIER ALONG ROAD AND SIDE DITCHES AT LOCATIONS AS NECESSARY TO KEEP SILT AND OR EXCAVATED MATERIALS FROM ENTERING INTO THE STORM WATER INLETS AND DITCHES EVENTUALLY POLLUTING THE RECEIVING STREAM.
- DURING THE EXCAVATION PHASE OF THE PROJECT, CONTRACTOR SHALL SCHEDULE THE WORK IN SHORT SEGMENTS SO THAT EXCAVATION MATERIAL CAN BE QUICKLY HAULED AWAY FROM THE SITE AND TO PREVENT IT FROM STAYING UNCOLLECTED ON THE EXISTING PAVEMENT. ANY LOOSE EXCAVATED MATERIAL WHICH FALLS ON PAVEMENTS OR DRIVEWAYS SHALL BE SWEEPED BACK INTO THE EXCAVATED AREA.
- 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.
- CONTRACTOR SHALL FOLLOW GOOD HOUSEKEEPING PRACTICES DURING THE CONSTRUCTION OF THE PROJECT, ALWAYS CLEANING UP DIRT AND LOOSE MATERIAL AS CONSTRUCTION PROGRESSES.

GENERAL MECHANICAL NOTES:

- REFER TO SPECIFICATION 01110 "SUMMARY OF WORK" FOR COORDINATION AND SCHEDULE REQUIREMENTS FOR CONSTRUCTION.
- LOCATIONS DIMENSIONS AND ELEVATIONS OF EXISTING FACILITIES SHALL BE FIELD VERIFIED BY CONTRACTOR PRIOR TO BEGINNING ANY WORK.
- PROTECT EXISTING STRUCTURES, PIPING, AND EQUIPMENT IN AREA. CONTRACTOR SHALL REPLACE OR REPAIR ITEMS DAMAGED DURING CONSTRUCTION OR DEMOLITION AT NO ADDITIONAL COST TO THE OWNER. TOUCHUP ITEMS THAT ARE AFFECTED DURING CONSTRUCTION.
- FIELD ROUTE PLANT WATER PIPE TO HOSE STATIONS AND YARD HYDRANTS IF NOT SHOWN ON DRAWINGS.
- ALL ANCHOR BOLTS, FASTENERS, HARDWARE, AND APPURTENANCES SHALL BE TYPE 316 STAINLESS STEEL UNLESS OTHERWISE NOTED.
- REFER TO STANDARD DETAILS AND SPECIFICATIONS FOR PIPE SUPPORT AND RESTRAINT REQUIREMENTS, WEIR PLATE, AND WALL OR FLOOR PIPE PENETRATION DETAILS.
- EQUIPMENT INSTALLATION:
 - PROVIDE EQUIPMENT PADS FOR ALL FLOOR MOUNTED EQUIPMENT AND ELECTRICAL EQUIPMENT AS SHOWN IN THE STANDARD DETAILS. ALL EQUIPMENT PAD HAVE NOT BEEN DESIGNATED ON THE DRAWINGS.
 - STORE AND PROTECT EQUIPMENT IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
 - EQUIPMENT WILL BE INSTALLED AS SHOWN AS THE DRAWINGS AND IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. PROVIDE AT THE SITE ONE COPY OF THE MANUFACTURER'S INSTRUCTIONS.
- PROVIDE A 1/2" THICK EXPANSION JOINT MATERIAL AROUND ALL PIPE PENETRATIONS THROUGH CONCRETE OR ASPHALT PAVING OR THROUGH SIDEWALK MOW STRIP.
- CONTRACTOR SHALL COORDINATE ELECTRICAL, INSTRUMENTATION, AND PIPING.

DEMOLITION AND SALVAGE NOTES:

THE CONTRACTOR SHALL COORDINATE ALL DEMOLITION AND SALVAGE WORK WITH A GENERAL DEMOLITION SCHEDULE. THE DRAWINGS ARE INTENDED TO CONVEY THE GENERAL NATURE AND SCOPE OF THE DEMOLITION AND SALVAGE WORK. EVERY ITEM TO BE DEMOLISHED OR SALVAGED MAY NOT BE SHOWN. FIELD VERIFY WITH THE OWNER PRIOR TO BID, AND INCLUDE ALL DEMOLITION AND SALVAGE WORK IN THE CONTRACT PRICE.

CAUTION: UNDERGROUND GAS FACILITIES

Locations of CenterPoint Energy main lines (to include CenterPoint Energy, Intrastate Pipeline, LLC. where applicable) are shown in an approximate location only. Service lines are usually not shown. Our signature on these plans only indicates that our facilities are shown in approximate location. It does not imply that a conflict analysis has been made. The contractor shall contact the Utility Coordinating Committee at (713) 223-4567, 1-800-669-8344 or 811 a minimum of 48 hours prior to construction to have main and service lines field located.

- When CenterPoint Energy pipe line markings are not visible, call (713) 945-8036 or (713-945-8037 (7:00 a.m. to 4:30 p.m.) for status of line location request before excavation begins.
- When excavating within eighteen inches (18") of the indicated location of CenterPoint Energy facilities, all excavation must be accomplished using non-mechanized excavation procedures.
- When CenterPoint Energy facilities are exposed, sufficient support must be provided to the facilities to prevent excessive stress on the piping.
- For emergencies regarding gas lines call (713) 659-3552 or (713) 207-4200.

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

WARNING: OVERHEAD ELECTRICAL LINES

Overhead lines may exist on the property. The location of overhead lines has not been shown on these drawings as the lines are clearly visible, but you should locate them prior to beginning any construction. Texas law, Section 752, Health & Safety Code forbids activities that occur in close proximity to high voltage lines, specifically:

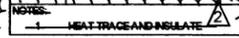
- Any activity where person or things may come within six(6) feet of live overhead high voltage lines; and
- Operating a crane, derrick, power shovel, drilling rig, pile driver, hoisting equipment, or similar apparatus within 10 feet of live overhead high voltage lines.

Parties responsible for the work, including contractors are legally responsible for the safety of construction workers under this law. This law carries both criminal and civil liability. To arrange for lines to be turned off or removed call CenterPoint Energy at (713) 207-2222.

ACTIVITIES ON OR ACROSS CENTERPOINT ENERGY FEE OR EASEMENT PROPERTY

No approval to use, cross or occupy CenterPoint fee or easement property is given. If you need to use CenterPoint property, please contact our Surveying & Right of Way Division at (713) 207-6248 or (713) 207-5769.

PIPE SCHEDULE											
PROCESS	APPLICATION	NOMINAL DIAMETER (INCHES)	INSTALLATION	MATERIAL	MINIMUM PRESSURE CLASS OR RATING	JOINT TYPE	OPERATING PRESSURE (PSI)	TEST PRESSURE (PSI)	COATING	EMBEDMENT CLASS	NOTES
NPW	NON-POTABLE WATER	2	BURIED	PVC	SCH 80	SOLVENT WELD	65	100	-	COH STANDARD DETAIL	
NPW	NON-POTABLE WATER	2	EXPOSED	GS	SCH 40	THREADED	65	100	HOT DIPPED GALVANIZED		
D	SANITARY SEWER DRAIN	4,8,12	BURIED	PVC	C-900	MJ	ATM	PER SPEC		COH STANDARD DETAIL	
V	SANITARY SEWER VENT	6	BURIED	PVC	C-900	MJ	ATM	PER SPEC		COH STANDARD DETAIL	
V	SANITARY SEWER VENT	6	EXPOSED	PVC	SCH 40	SOLVENT WELD	ATM	PER SPEC		COH STANDARD DETAIL	

NOTES:
 HEAT TRACE AND INSULATE

NO.	DATE	REVISION	BY
APAI NO.:	1102-003-004	DRAWN BY:	
ISSUE DATE:		CHECKED BY:	
TO ARRANGE FOR LINES TO BE TURNED OFF OR MOVED, CALL CENTERPOINT ENERGY AT 713-207-2222.			
NOTICE:			
For your safety, you are required by Texas law to call 811 at least 48 hours before you dig so that underground lines can be marked. This verification does not fulfill your obligation to call 811.			
VERIFICATION OF PRIVATE UTILITY LINES			
Date			
CenterPoint Energy / Natural Gas Facilities ONLY. (This Signature verifies that you have shown CNP Natural Gas lines correctly - not to be used for conflict verification.) (Gas service lines are not shown.) Signature Valid for six months.			
Date			
CenterPoint Energy / UNDERGROUND Electrical Facilities Verification ONLY. (This Signature verifies that you have shown CNP Natural Gas lines correctly - not to be used for conflict verification.) Signature Valid for six months.			
 			
SURVEYED BY: AMANI FB NO. P-5900			
ALAN PLUMMER ASSOCIATES, INC. F-13			

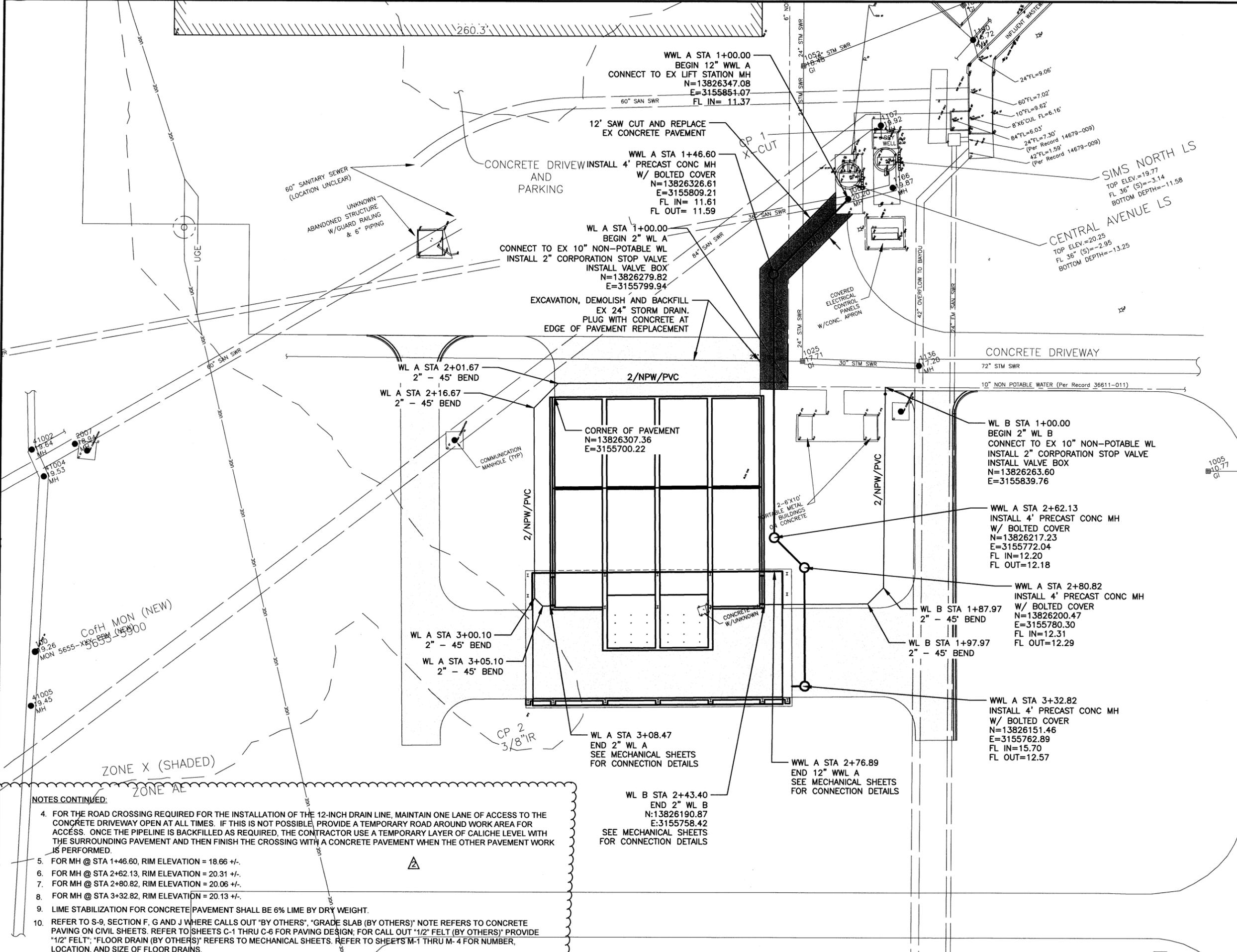
CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

SIMS NORTH WASTE & DEBRIS HANDLING STATION

GENERAL CONSTRUCTION NOTES

WBS NUMBER	FOR CITY OF HOUSTON USE ONLY
R-000265-0081-4	
DRAWING SCALE	
NOT TO SCALE	
CITY OF HOUSTON PM	
Iraj M. Ranjbar, P.E.	
DWG NO.:	G-3
SHEET NO.	3 OF 41

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NOTES:

1. SURVEY FILE IS ONLY ACCURATE FOR THE REFERENCE POINTS ESTABLISHED IN THE AREA PLAN.
2. 2"/NPW/PVC SHALL HAVE A MINIMUM OF 3 FEET OF COVER.
3. TOPS OF MANHOLES SHALL BE FLUSH WITH THE TOP OF PAVEMENT OR PROPOSED GRADE.

SEE ADDITIONAL NOTES BELOW

NO.	DATE	REVISION	BY
07-20-18		ADDENDUM 2	ZL
APAI NO.: 1102-003-004		DRAWN BY:	
ISSUE DATE:		CHECKED BY:	

TO AVOID FUR LINES TO BE TURNED OFF OR MOVED, CALL CENTERPOINT ENERGY AT 713-207-2222.

NOTICE:
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VERIFICATION OF PRIVATE UTILITY LINES

Date

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(Gas service lines are not shown.)
Signature Valid for six months.

CenterPoint Energy / UNDERGROUND Electrical Facilities Verification ONLY.
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Signature Valid for six months.

ALAN PLUMMER ASSOCIATES, INC.
ENVIRONMENTAL ENGINEERS AND SCIENTISTS
3100 WESTBERRY DRIVE, SUITE 279
HOUSTON, TEXAS 77042-6029
PHONE: 713-464-2724 FAX: 713-464-2725
TEXAS REGISTERED ENGINEERING FIRM E-13

ANDREW M. CREEL
107223
1/29/18
ALAN PLUMMER ASSOCIATES, INC.
F-13

SURVEYED BY: AMANI
FB NO. P-5900

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

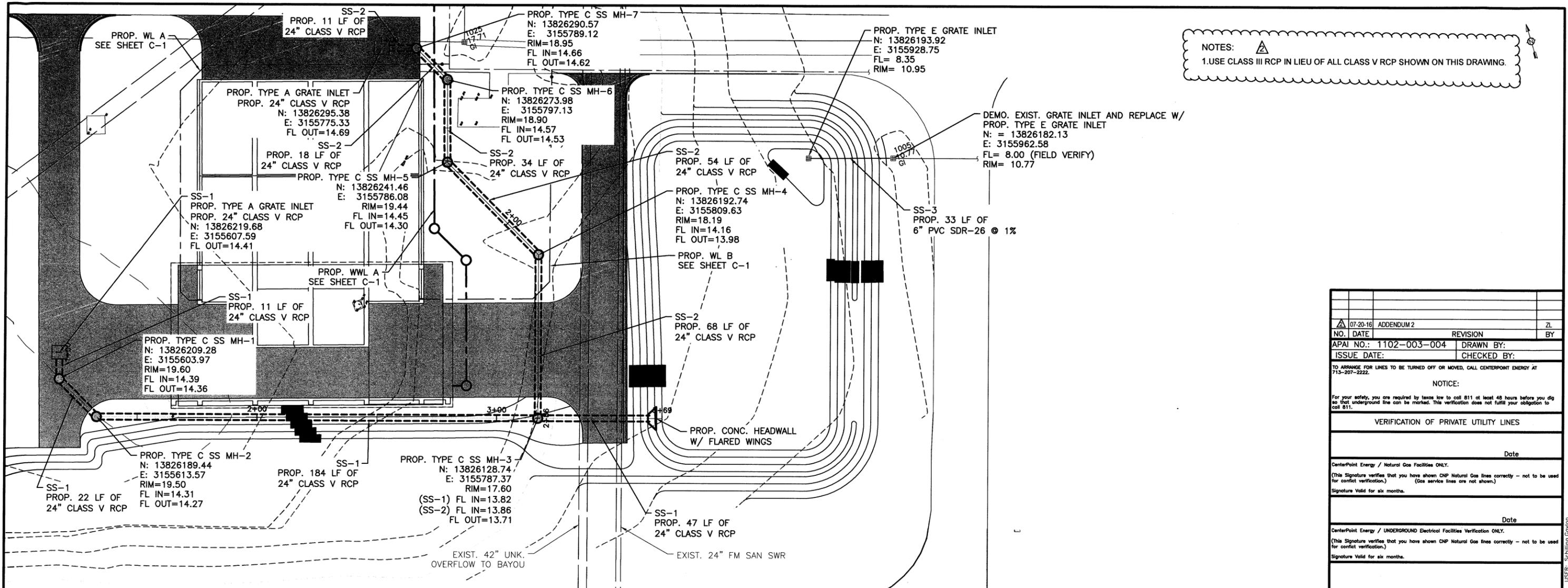
SIMS NORTH WASTE & DEBRIS HANDLING STATION

UTILITY AREA PLAN

WBS NUMBER	FOR CITY OF HOUSTON USE ONLY
R-000265-0081-4	
DRAWING SCALE	
1" = 20'	
CITY OF HOUSTON PM	
Iraj M. Ranjbar, P.E.	
DWG NO.: C-1	
SHEET NO. 9 OF 41	

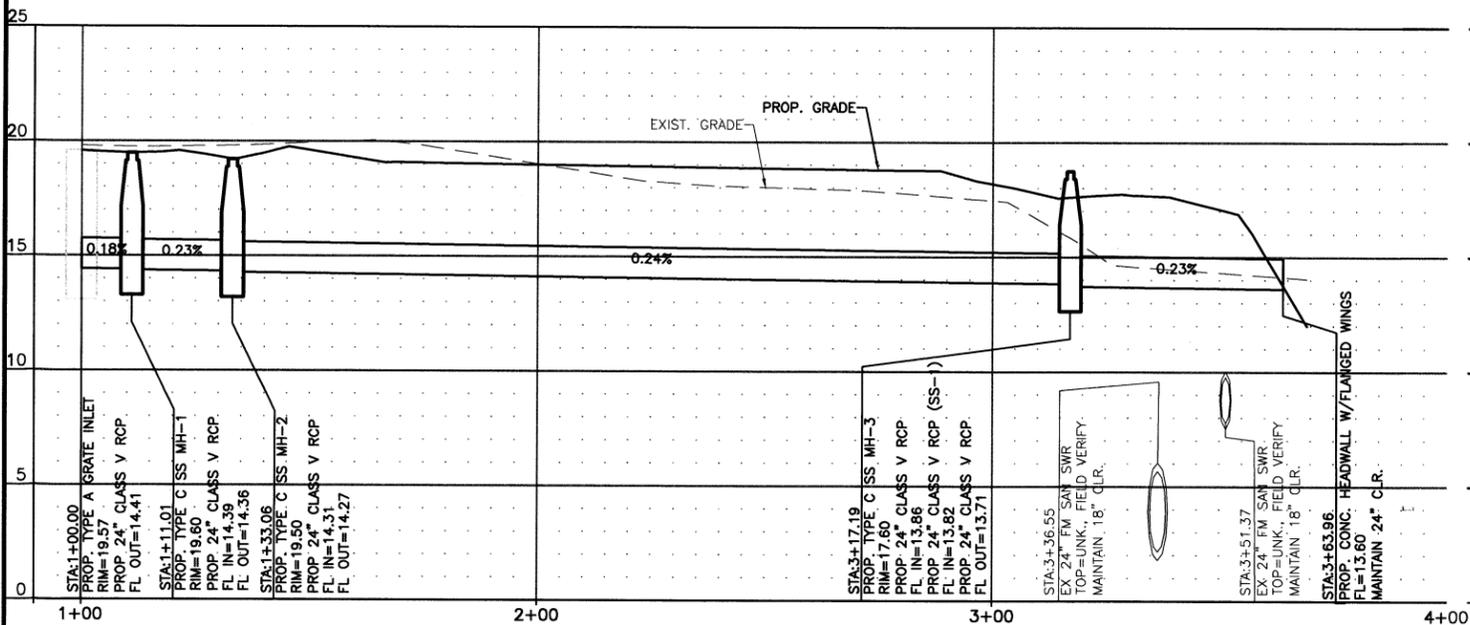
NOTES CONTINUED:

4. FOR THE ROAD CROSSING REQUIRED FOR THE INSTALLATION OF THE 12-INCH DRAIN LINE, MAINTAIN ONE LANE OF ACCESS TO THE CONCRETE DRIVEWAY OPEN AT ALL TIMES. IF THIS IS NOT POSSIBLE, PROVIDE A TEMPORARY ROAD AROUND WORK AREA FOR ACCESS. ONCE THE PIPELINE IS BACKFILLED AS REQUIRED, THE CONTRACTOR USE A TEMPORARY LAYER OF CALICHE LEVEL WITH THE SURROUNDING PAVEMENT AND THEN FINISH THE CROSSING WITH A CONCRETE PAVEMENT WHEN THE OTHER PAVEMENT WORK IS PERFORMED.
5. FOR MH @ STA 1+46.60, RIM ELEVATION = 18.66 +/-.
6. FOR MH @ STA 2+62.13, RIM ELEVATION = 20.31 +/-.
7. FOR MH @ STA 2+80.82, RIM ELEVATION = 20.06 +/-.
8. FOR MH @ STA 3+32.82, RIM ELEVATION = 20.13 +/-.
9. LIME STABILIZATION FOR CONCRETE PAVEMENT SHALL BE 6% LIME BY DRY WEIGHT.
10. REFER TO S-9, SECTION F, G AND J WHERE CALLS OUT "BY OTHERS", "GRADE SLAB (BY OTHERS)" NOTE REFERS TO CONCRETE PAVING ON CIVIL SHEETS. REFER TO SHEETS C-1 THRU C-6 FOR PAVING DESIGN; FOR CALL OUT "1/2" FELT (BY OTHERS)" PROVIDE "1/2" FELT; "FLOOR DRAIN (BY OTHERS)" REFERS TO MECHANICAL SHEETS. REFER TO SHEETS M-1 THRU M-4 FOR NUMBER, LOCATION, AND SIZE OF FLOOR DRAINS.

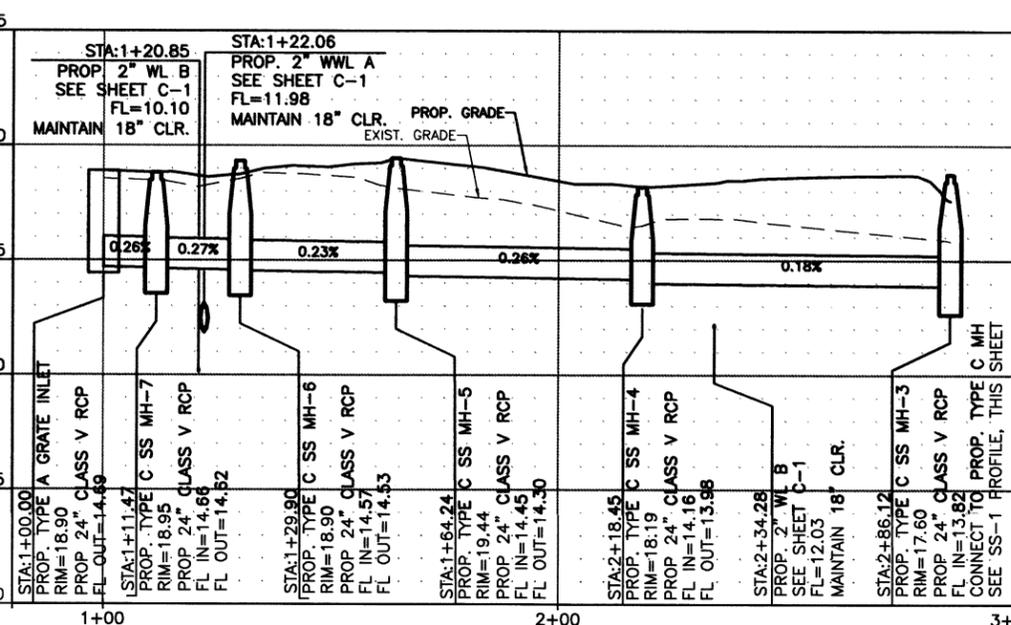


NOTES:
 1. USE CLASS III RCP IN LIEU OF ALL CLASS V RCP SHOWN ON THIS DRAWING.

STORM SEWER PLAN
 SCALE: 1" = 20'



STORM SEWER (SS-1) PROFILE
 HORIZ: 1" = 20'
 VERT: 1" = 4'



STORM SEWER (SS-2) PROFILE
 HORIZ: 1" = 20'
 VERT: 1" = 4'

NO.	DATE	REVISION	BY
07-20-16		ADDENDUM 2	ZL
APAI NO.: 1102-003-004		DRAWN BY:	
ISSUE DATE:		CHECKED BY:	

NOTICE:
 For your safety, you are required by Texas law to call 811 at least 48 hours before you dig so that underground lines can be marked. This verification does not fulfill your obligation to call 811.

VERIFICATION OF PRIVATE UTILITY LINES

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CenterPoint Energy / UNDERGROUND Electrical Facilities Verification ONLY.
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ALAN PLUMMER ASSOCIATES, INC.
 ENVIRONMENTAL ENGINEERS AND SCIENTISTS
 3100 WILCREST DRIVE, SUITE 270
 HOUSTON, TEXAS 77064-4009
 PHONE: 713-464-2724 FAX: 713-464-2725
 TEXAS REGISTERED ENGINEERING FIRM #13

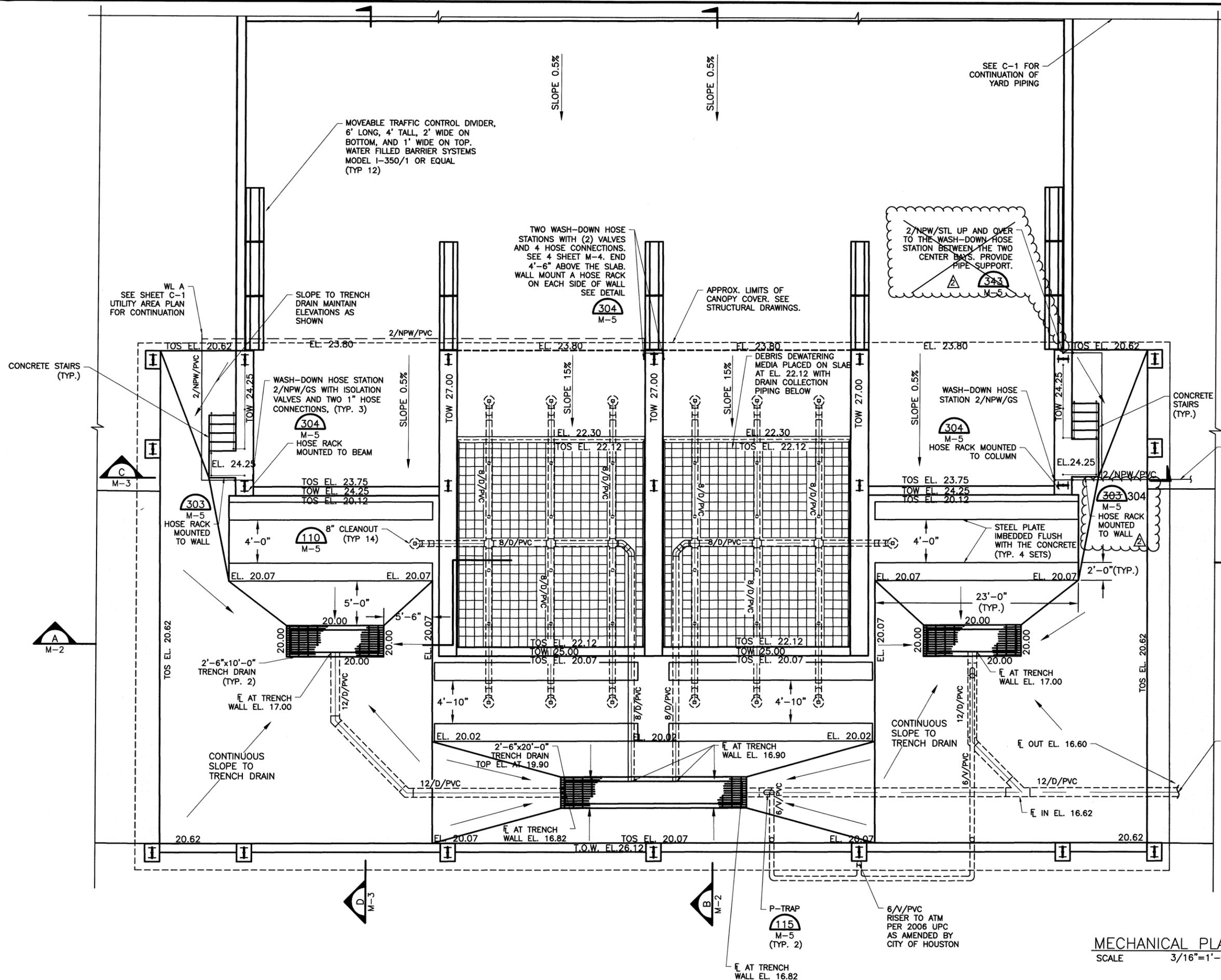
107223
 ANDREW M. CREEL
 PROFESSIONAL ENGINEER
 Andrew Creel 3/10/18
 ALAN PLUMMER ASSOCIATES, INC.
 F-13

SURVEYED BY: AMANI
 FB NO. P-5900

CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
SIMS NORTH WASTE & DEBRIS HANDLING STATION
STORM SEWER PLAN & PROFILE

WBS NUMBER	FOR CITY OF HOUSTON USE ONLY
R-000265-0081-4	
DRAWING SCALE	
AS NOTED	
CITY OF HOUSTON PM	
Iraj M. Ranjbar, P.E.	
DWG NO.: C-4	
SHEET NO. 12 OF 41	

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- GENERAL NOTES:
1. ABOVE GROUND NON-POTABLE WATER PIPING SHALL BE GALVANIZED STEEL.
 2. TRENCH DRAINS SHALL BE PRECAST CONCRETE WITH END CAPS AND HOT DIPPED GALVANIZED GRATES. DRAINS SHALL BE TRENWA MODEL BHS2448-120 WITH MODEL VHS2448-30 GRATES.
 3. PROVIDE SYSTEM 108 COATING FOR NEW CONCRETE AS FOLLOWS: COAT THE CONCRETE SLAB BENEATH THE DRAIN TILES AND COAT THE CONCRETE SIDE WALLS UP TO THE TOP OF THE LUMBER PIECES ABOVE THE DRAIN TILES.
 4. EMBEDDED PLATES SHALL BE 3/8" THICK.

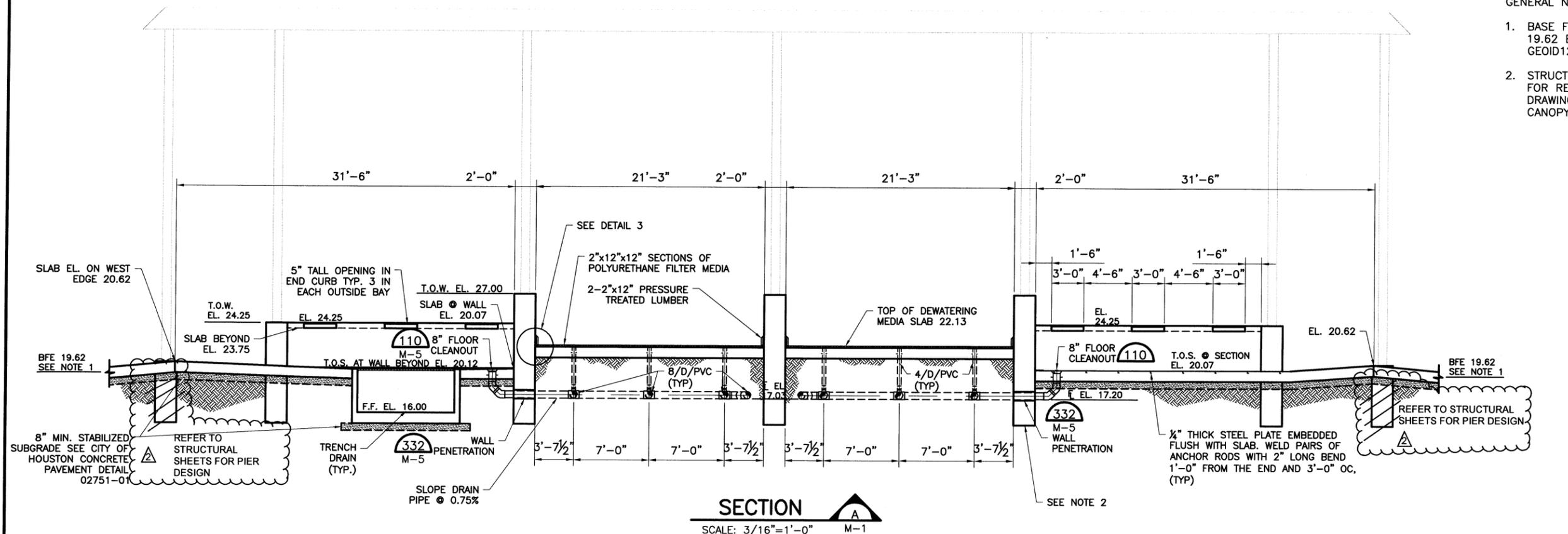
07-20-16 ADDENDUM 2		ZL
NO. DATE	REVISION	BY
APAI NO.: 1102-003-004	DRAWN BY:	
ISSUE DATE:	CHECKED BY:	
TO ARRANGE FOR LINES TO BE TURNED OFF OR MOVED, CALL CENTERPOINT ENERGY AT 713-207-2222.		
NOTICE: For your safety, you are required by Texas law to call 811 at least 48 hours before you dig so that underground lines can be marked. This verification does not fulfill your obligation to call 811.		
VERIFICATION OF PRIVATE UTILITY LINES		
Date		
CenterPoint Energy / Natural Gas Facilities ONLY. (This Signature verifies that you have shown CNP Natural Gas lines correctly - not to be used for conflict verification.) (Gas service lines are not shown.) Signature Valid for six months.		
Date		
CenterPoint Energy / UNDERGROUND Electrical Facilities Verification ONLY. (This Signature verifies that you have shown CNP Natural Gas lines correctly - not to be used for conflict verification.) Signature Valid for six months.		
Date		
SURVEYED BY: AMANI FB NO. P-5900		
ALAN PLUMMER ASSOCIATES, INC. F-13		
CITY OF HOUSTON DEPARTMENT OF PUBLIC WORKS AND ENGINEERING SIMS NORTH WASTE & DEBRIS HANDLING STATION FILTER & ROLL-OFF AREA MECHANICAL PLAN		
WBS NUMBER	FOR CITY OF HOUSTON USE ONLY	
R-000265-0081-4		
DRAWING SCALE		
3/16"=1'-0"		
CITY OF HOUSTON PM		
Iraj M. Ranjbar, P.E.		
DWG NO.: M-1		
SHEET NO. 15 OF 41		

MECHANICAL PLAN
SCALE 3/16"=1'-0"

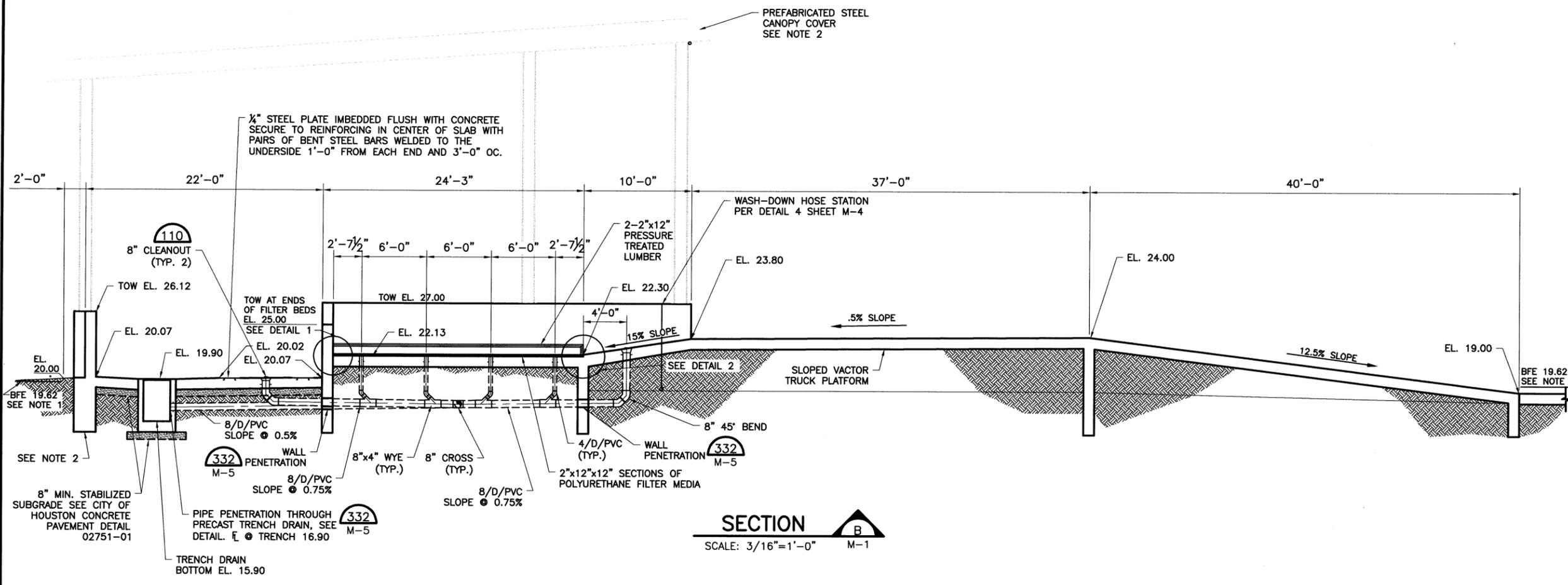
PRINTED: 4/13/2016 11:58 PM \\Houston\ncu\apps\share\Projects\1102\003-004\Acad\SheetFiles\M-1 - PLAN.dwg SAVED BY: Gschilling USER: Gschilling, Guyton

GENERAL NOTES:

1. BASE FLOOD ELEVATION AT THE SITE IDENTIFIED AS 19.62 BY THE FMO BASED ON THE NAVD88 GEOID12A DATUM USED FROM THE SURVEY.
2. STRUCTURE SHOWN ON THIS DRAWING IS SHOWN FOR REFERENCE ONLY. SEE THE STRUCTURAL DRAWINGS FOR DETAILS OF THE FOUNDATION, WALLS, CANOPY COVER, AND REINFORCING.



SECTION A
SCALE: 3/16"=1'-0" M-1

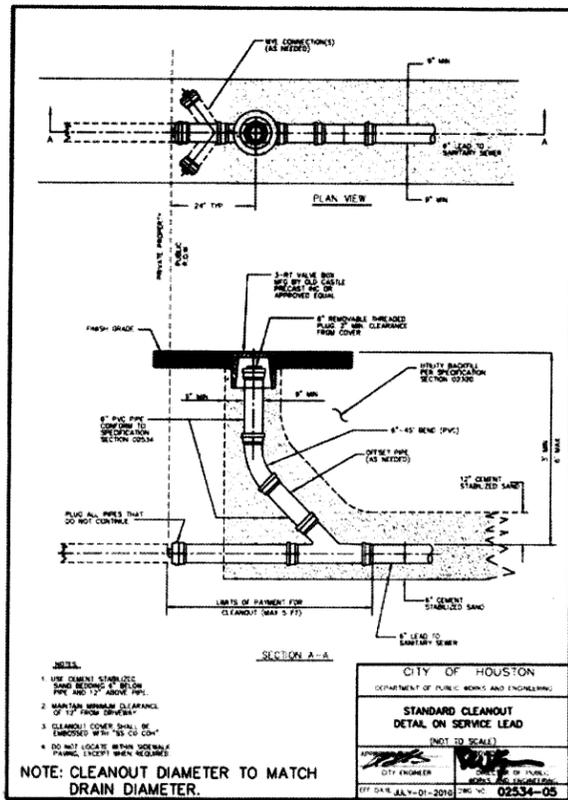


SECTION B
SCALE: 3/16"=1'-0" M-1

NO.	DATE	REVISION	BY
07-20-16	ADDENDUM 2		ZL
APAI NO.: 1102-003-004		DRAWN BY:	
ISSUE DATE:		CHECKED BY:	
TO ARRANGE FOR LINES TO BE TURNED OFF OR MOVED, CALL CENTERPOINT ENERGY AT 713-207-2222.			
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VERIFICATION OF PRIVATE UTILITY LINES			
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		Date	
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SURVEYED BY: AMANI FB NO. P-5900		ALAN PLUMMER ASSOCIATES, INC. F-13	

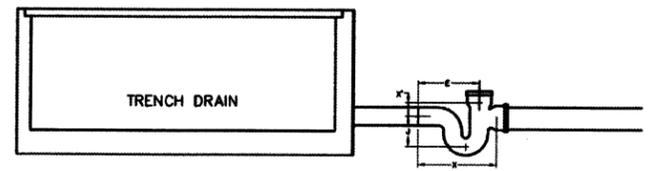
CITY OF HOUSTON DEPARTMENT OF PUBLIC WORKS AND ENGINEERING	
SIMS NORTH WASTE & DEBRIS HANDLING STATION	
FILTER & ROLL-OFF AREA MECHANICAL SECTIONS	
WBS NUMBER	FOR CITY OF HOUSTON USE ONLY
R-000265-0081-4	
DRAWING SCALE	
3/16"=1'-0"	
CITY OF HOUSTON PM	
Iraj M. Ranjbar, P.E.	
DWG NO.: M-2	
SHEET NO. 16 OF 41	

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8" CLEANOUT
NOT TO SCALE (110)

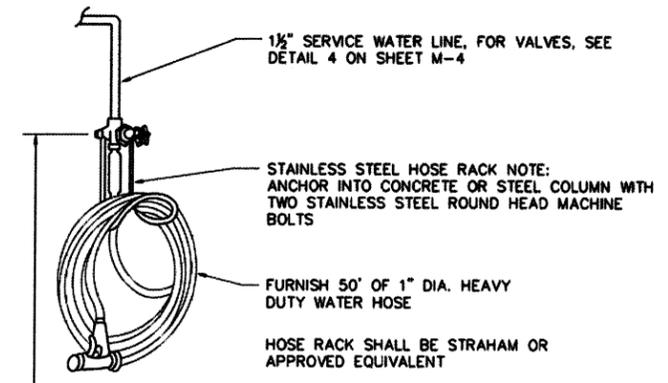
ROUTE VENT TO ATMOSPHERE UNDER CONCRETE SLAB PER UPC 2006 AS AMENDED BY THE CITY OF HOUSTON. DIAMETER OF VENT SHALL BE 1/2 THE DIAMETER OF THE DRAIN PIPE.



RUNNING TRAP WITH VENT

SIZE	(VENT)	X	X'	E	J
12"	(10")	38 1/2"	7 1/2"	31 1/2"	15"

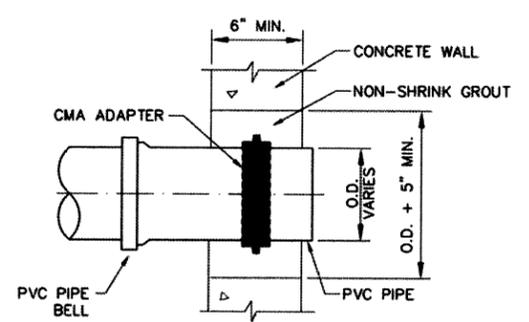
P-TRAP DETAIL
NOT TO SCALE (115)



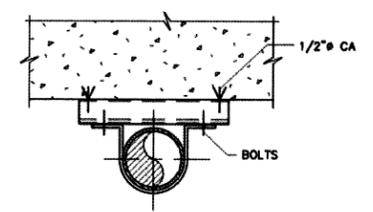
MOUNT RACK AT HEIGHT APPROVED BY OWNER

MOUNT ONE NON-POTABLE WATER SIGN (STONEHOUSE SIGN COMPANY LXSIGN STOCK NO. 89-20 OR APPROVED EQUAL) AT EACH HOSE STATION

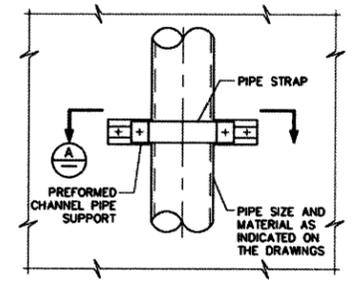
HOSE RACK
NOT TO SCALE (304)



PVC WALL PENETRATION
NOT TO SCALE (332)



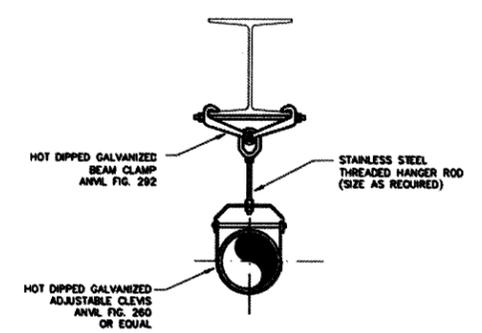
SECTIONAL PLAN



ELEVATION

NOTE:
1. ALL MATERIALS SHALL BE STAINLESS STEEL.

PIPE SUPPORT FOR ONE VERTICAL RISER
NOT TO SCALE (343)



ADJUSTABLE CLEVIS DETAIL
NOT TO SCALE (355)

NO.	DATE	REVISION	BY
07-20-16		ADDENDUM 2	ZL
APAI NO.:	1102-003-004	DRAWN BY:	
ISSUE DATE:		CHECKED BY:	

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

NOTICE:
For your safety, you are required by law to call 811 at least 48 hours before you dig so that underground lines can be marked. This verification does not fulfill your obligation to call 811.

VERIFICATION OF PRIVATE UTILITY LINES

Date

CenterPoint Energy / Natural Gas Facilities ONLY.
(This Signature verifies that you have shown CIP Natural Gas lines correctly - not to be used for conflict verification.)
Signature Valid for six months.

VERIFICATION OF UNDERGROUND ELECTRICAL FACILITIES ONLY.

Date

CenterPoint Energy / UNDERGROUND Electrical Facilities Verification ONLY.
(This Signature verifies that you have shown CIP Natural Gas lines correctly - not to be used for conflict verification.)
Signature Valid for six months.

ALAN PLUMMER ASSOCIATES, INC.
1700 WEST CREST DRIVE, SUITE 770
HOUSTON, TEXAS 77042-4029
PHONE: 713-948-5724 FAX: 713-948-5725
TEXAS REGISTERED ENGINEERING FIRM #11

WILLIAM RACKLEY
74884

SURVEYED BY: AMANI
FB NO. P-5900

ALAN PLUMMER ASSOCIATES, INC.
F-13

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

SIMS NORTH WASTE & DEBRIS HANDLING STATION

MECHANICAL DETAILS

WBS NUMBER	FOR CITY OF HOUSTON USE ONLY
R-000265-0081-4	
DRAWING SCALE	
1 1/2"=1'-0"	
CITY OF HOUSTON PM	
troj M. Ranjbar, P.E.	
DWG NO.: M-5	
SHEET NO. 19 OF 41	

PRINTED: 7/19/2016 12:18 PM H:\Projects\1102\003-04\Acad\Sheetfiles\M-5 DETAILS.dwg SAVED: 4/13/2016 2:12 PM SAVED BY: Gschilling USER: Gschilling, Gschilling

GENERAL NOTES:

1. PRIOR TO START OF WORK, CONTRACTOR SHALL AWARE HIMSELF OF ALL EXISTING CONDITIONS ABOVE AND UNDERGROUND SO AS NOT TO DAMAGE OR SEVER ANY SERVICES SUCH AS POWER, GAS, COMMUNICATION, UTILITY, ETC.
2. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT "ONE CALL" SERVICE TO LOCATE AND IDENTIFY ALL UNDERGROUND SERVICE LINES PRIOR TO START OF CONSTRUCTION.
3. WEAK AND WET SOILS UNDER FOUNDATIONS MUST BE REMOVED AND REPLACED WITH SELECT FILL. EXPOSED SUB-GRADE SHALL BE COMPACTED TO 95% OF MAXIMUM DRY DENSITY AT OPTIMUM MOISTURE CONTENT ACCORDING TO ASTM D698. STRUCTURAL FILL SHALL BE THEN PLACED IN 8" LIFTS AND COMPACTED AS ABOVE TO REQUIRED SUB-GRADE ELEVATION. COMPACTION DENSITY TEST SHALL BE DONE TO VERIFY 95% COMPACTION IS ACHIEVED AT OPTIMUM MOISTURE CONTENT PRIOR TO PLACING CONCRETE.
4. CONCRETE DESIGN AND CONSTRUCTION SHALL BE IN STRICT ACCORDANCE WITH THE LATEST EDITION OF ACI-318 "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE". ALL CONCRETE SHALL CONFORM TO ASTM C150, TYPE I OR TYPE II.
5. UNLESS OTHERWISE NOTED ON THE DRAWINGS, CONCRETE COMPRESSIVE STRENGTH AT 28 DAYS SHALL NOT BE LESS THAN THE FOLLOWING:

FOUNDATIONS, WALLS, SUSPENDED SLABS	4000 PSI
SLABS ON GRADE	4000 PSI
GROUT FILL CLASS H	3000 PSI
LEAN CONCRETE CLASS B	1500 PSI
6. CONCRETE COVER (CLEAR) FOR REINFORCEMENT, UNLESS OTHERWISE NOTED, SHALL BE:

CONCRETE POURED AGAINST EARTH = 3"
FORMED SURFACES EXPOSED TO WEATHER, EARTH, OR LIQUIDS = 2"
ALL OTHER EXPOSURES = 1 1/2"
7. ALL REINFORCING SHALL CONFORM TO ASTM A-615, GRADE 60.
8. MAINTAIN CONCRETE TEMPERATURE AT OR ABOVE 50°F(10°C). IF THE AVERAGE DAILY TEMPERATURE FALLS BELOW 40°F FOR MORE THAN THREE SUCCESSIVE DAYS, FOLLOW COLD WEATHER CONCRETING PRECAUTIONS AS PER ACI 306R "COLD WEATHER CONCRETING".
9. ANCHOR BOLTS, NUTS & WASHERS SHALL CONFORM TO ASTM A-316 STAINLESS STEEL.
10. ALL EQUIPMENT ANCHOR BOLTS DIMENSION AND LOCATION SHALL BE VERIFIED FROM CERTIFIED VENDOR DRAWINGS PRIOR TO PLACEMENT
11. EPOXY ANCHORS SHALL BE HILTI-HIT ANCHOR OR APPROVED EQUAL.
12. ALL GROUT SHALL BE NON-SHRINK EPOXY TYPE USED IN NON-SHRINK APPLICATIONS SUCH AS COLUMN/BEAM BEARING AND EQUIPMENT BASES. HIGH PRECISION MEDIUM BASE GROUT SHALL BE EPOGROUT 75% MANUFACTURED BY L&M CONSTRUCTION CHEMICALS OR APPROVED EQUAL.
13. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND SIZES OF STRUCTURAL MEMBERS BEFORE START OF FABRICATION. ANY DISCREPANCIES BETWEEN THESE DRAWINGS AND THE FIELD CONDITIONS SHALL BE NOTIFIED IN WRITING TO THE ENGINEER BEFORE COMMENCING WORK.
14. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH OSHA REGULATIONS AND STATE & CITY SAFETY STANDARDS AND PROCEDURES.
15. ALL STRUCTURAL STEEL SHALL CONFORM TO THE LATEST AISC "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS.
16. ALL STRUCTURAL STEEL SHALL BE HOT-DIPPED GALVANIZED AS PER SPECIFICATION SECTION 05120.
17. ALL BOLTED CONNECTIONS SHALL BE MADE WITH 3/4"Ø STAINLESS STEEL EXCEPT AS OTHERWISE SHOWN OR NOTED.

18. ALL GRATINGS SHALL BE 1 1/2" SERRATED, HOT DIPPED GALVANIZED. GALVANIZING SHALL HAVE A MIN. OF 3 OZ./SQ.FT. OF COATING. ALL GRATINGS SHALL BE BANDED. BANDING SHALL BE WELDED TO EVERY FIFTH BEARING BAR.
19. GRATING HOLD DOWN CLIPS SHALL BE STAINLESS STEEL. SADDLE TYPE CLIPS ENGAGING TWO(2) MAIN BEARING BARS SHALL BE SECURED TO SUPPORTING MEMBER WITH SELF TAPPING, THREAD CUTTING STAINLESS STEEL SCREWS. A MINIMUM OF FOUR(4) HOLD DOWN CLIPS PER PANEL SHALL BE USED.
20. ALL HANDRAIL SHALL BE ALUMINUM PIPE HANDRAILS U.N.O.
21. ALL FIELD CONNECTIONS SHALL BE BOLTED
22. ALL SHOP CONNECTIONS SHALL BE WELDED
23. ALL MASONRY REINFORCEMENTS SHALL BE OF SIZE AND TYPE SPECIFIED. ALL REINFORCING SHALL BE SET IN FULL MORTAR BED OR IN FULLY GROUTED CELLS.
24. REFER TO MECHANICAL, ELECTRICAL, PLUMBING & ARCHITECTURAL DRAWINGS FOR ALL SLEEVES, PIPES, CONDUITS AND MISC. ANCHORING DEVICES TO BE INCORPORATED IN THE CONSTRUCTION.
25. DRILLED PIER FOUNDATION SYSTEM SHALL BE PROVIDED FOR STRUCTURES IDENTIFIED ON THE DRAWINGS. PROCEDURE FOR DRILLING & CONCRETING OF THE PIERS SHALL BE AS PER THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT WBS No. R-000265-081-3, PROJECT No. 14-543E DATED OCT. 05, 2015 UNDERTAKEN BY GEOTECH ENGINEERING and TESTING.
26. DRILLED PIER LENGTHS SHOWN ON THE DRAWINGS ARE FOR GUIDANCE ONLY. CONTRACTOR SHALL FIELD DETERMINE THE FINAL LENGTHS & SHALL ALSO ENSURE THE MINIMUM SPECIFIED PENETRATION OF THE DRILLED PIERS IS ACHIEVED. ANY SUBSTANTIAL VARIATION IN LENGTHS FROM THOSE SPECIFIED IN THE DRAWINGS SHALL BE NOTIFIED TO THE CLIENTS REPRESENTATIVE FOR FURTHER EVALUATION.
27. ALL DRILLED PIERS SHALL BE REINFORCED FOR THE FULL DEPTH OF EMBEDMENT/PENETRATION.
28. BASIC DESIGN LOADS:

THE TRUCK PLATFORM IS DESIGNED FOR ONE TRUCK PER BAY.

FOR METAL ROOF COVER IS DESIGNED TO MEET IBC 2006 AND AS AMENDED BY THE CITY OF HOUSTON, THE IFC 2006:

WIND LOAD : 110 MPH (3-SECOND GUST)

ROOF LOAD : IRC 20 PSF

FLOOR LOAD : HS 20-44 TRUCK LOAD
29. FABRICATED HANDRAILS & GUARD RAILS SHALL BE DESIGNED AND CONSTRUCTED PER THE 2006 IBC AS AMENDED BY THE CITY OF HOUSTON.

7-28-16		ADDENDUM 2				RR	
NO.	DATE	REVISION					BY
APAI NO.: 1102-003-04				DRAWN BY:			
ISSUE DATE:				CHECKED BY:			

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(This signature verifies that you have shown CNP Natural Gas lines correctly - not to be used for conflict verification.)

(Gas service lines are not shown.)

Signature valid for six months.

Date:

CenterPoint Energy/UNDERGROUND Electrical Facilities Verification ONLY.

(This signature verifies existing underground facilities - not to be used for conflict verification.)

Signature valid for six months.

<p>RATNALA & BAHL, INC.</p> <p>11767 KATY FREEWAY, SUITE 510 HOUSTON, TEXAS 77078</p>	 <p>3/9/2016</p>
--	--



ALAN PLUMMER ASSOCIATES, INC.

ENVIRONMENTAL ENGINEERS AND SCIENTISTS

3100 WILCREST DRIVE, SUITE 270
HOUSTON, TEXAS 77042-6029
PHONE: 713-464-2724 FAX: 713-464-2725
TEXAS REGISTERED ENGINEERING FIRM F-13

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

SIMS NORTH WASTE & DEBRIS HANDLING STATION

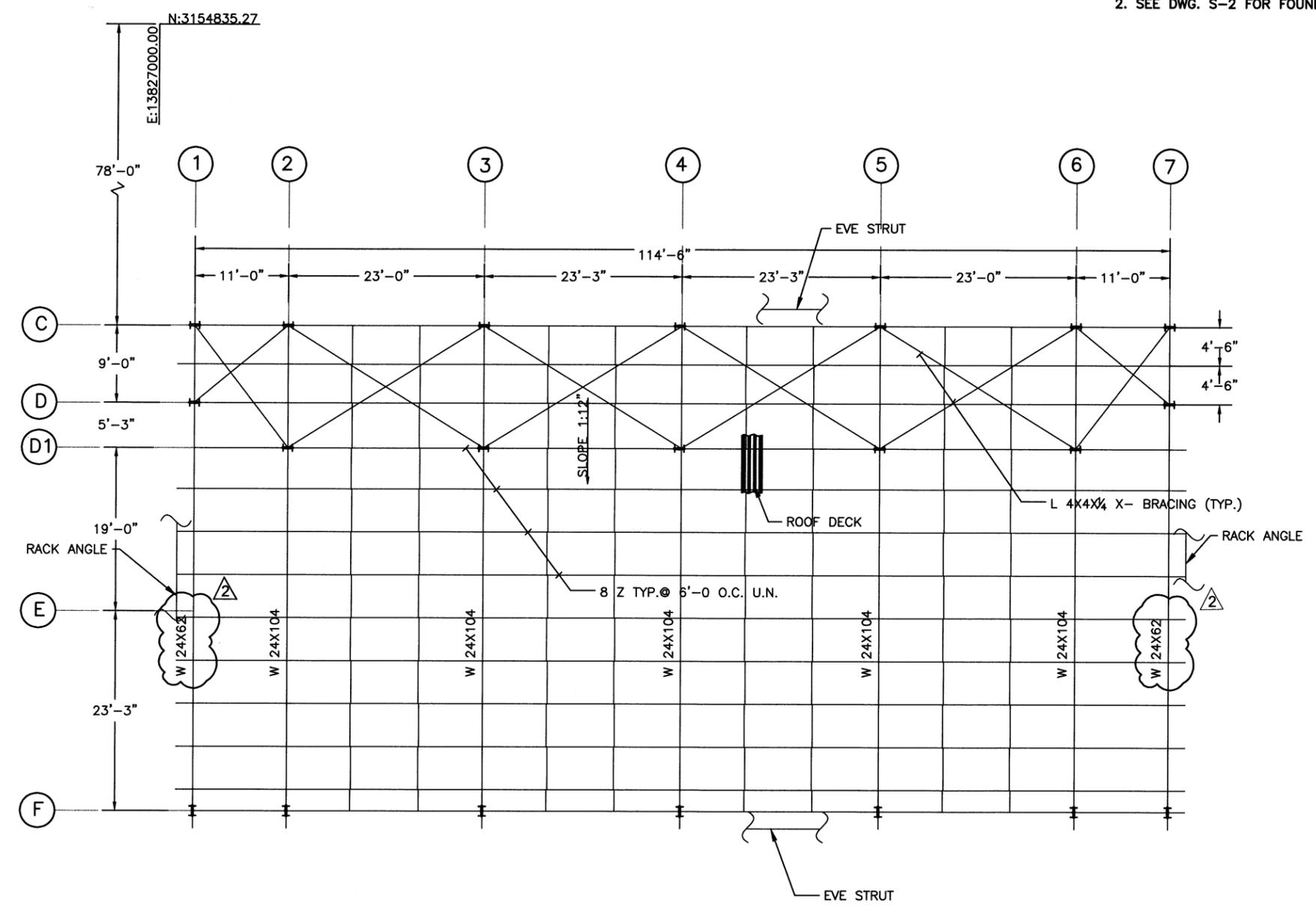
GENERAL STRUCTURAL NOTES

WBS NUMBER	FOR CITY OF HOUSTON USE ONLY
R-000265-0081-4	
DRAWING SCALE	
CITY OF HOUSTON PM	
IRAJ M. RANJBAR, P.E.	
DWG NO.: S-1	
SHEET NO. 20 OF 41	

PRINTED: 7/18/2016 3:39 PM I:\2014 JOBS\1402- SIMS NORTH DEBRIS STATION\WORKING FOLDER\5-1 General Structural Notes.dwg SAJED: 7/18/2016 3:38 PM SAVED BY: Ingrid USEE: Ingrid



- NOTES:
 1. SEE DWG. S-1 FOR GENERAL NOTES.
 2. SEE DWG. S-2 FOR FOUNDATION NOTES.



ROOF FRAMING PLAN
 SCALE 1/8"=1'-0"

7-28-16 ADDENDUM 2		RR
NO.	DATE	REVISION
APAI NO.:	1102-003-04	DRAWN BY:
ISSUE DATE:		CHECKED BY:

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RATNALA & BAHL, INC.
 11787 KATY FREEWAY, SUITE 510
 HOUSTON, TEXAS 77078

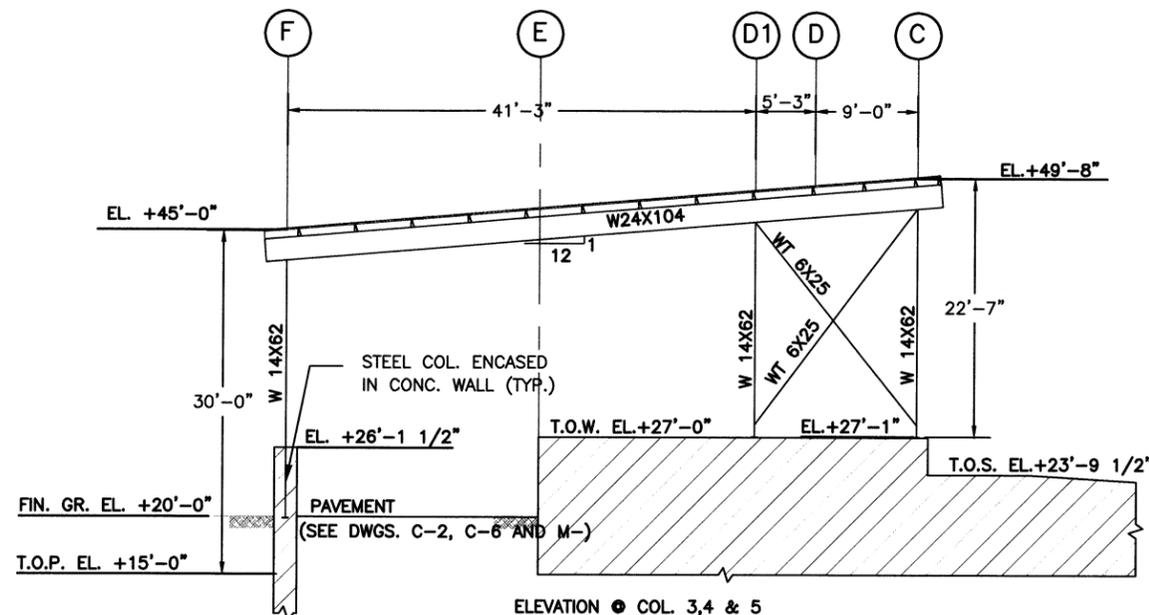
11-19-2015

ALAN PLUMMER ASSOCIATES, INC.
 ENVIRONMENTAL ENGINEERS AND SCIENTISTS
 3100 WILCREST DRIVE, SUITE 270
 HOUSTON, TEXAS 77042-6029
 PHONE: 713-464-2724 FAX: 713-464-2725
 TEXAS REGISTERED ENGINEERING FIRM F-13

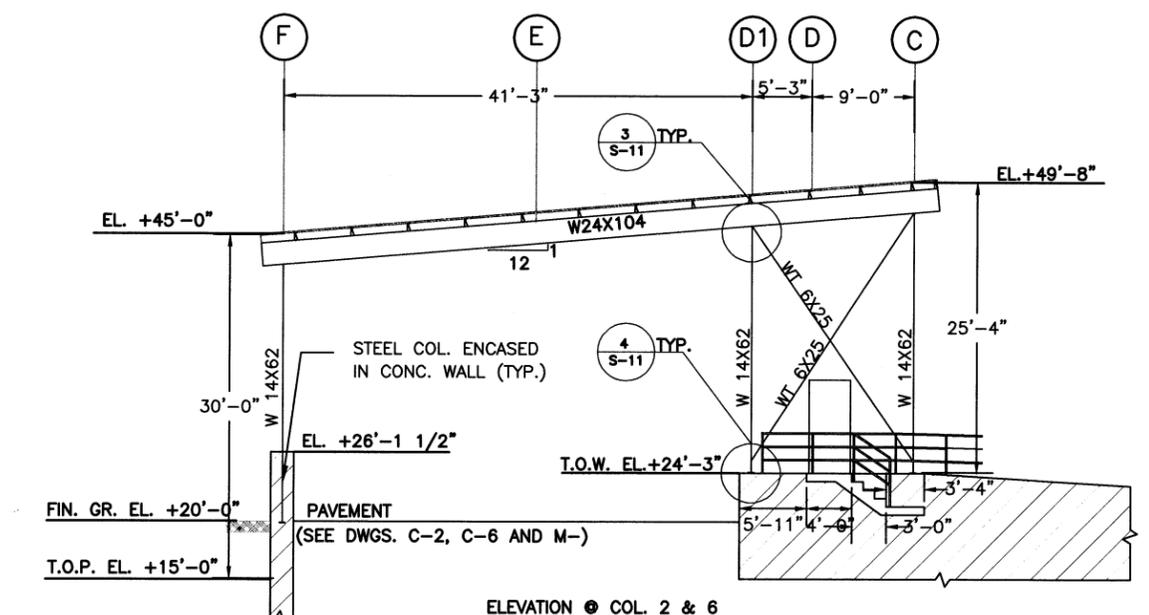
CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
SIMS NORTH WASTE & DEBRIS HANDLING STATION
ROOF FRAMING PLAN

WBS NUMBER	FOR CITY OF HOUSTON USE ONLY
R-000265-0081-4	
DRAWING SCALE	
1/8" = 1'-0"	
CITY OF HOUSTON PM	
IRAJ M. RANJBAR, P.E.	
DWG NO.: S-6	
SHEET NO. 25 OF 41	

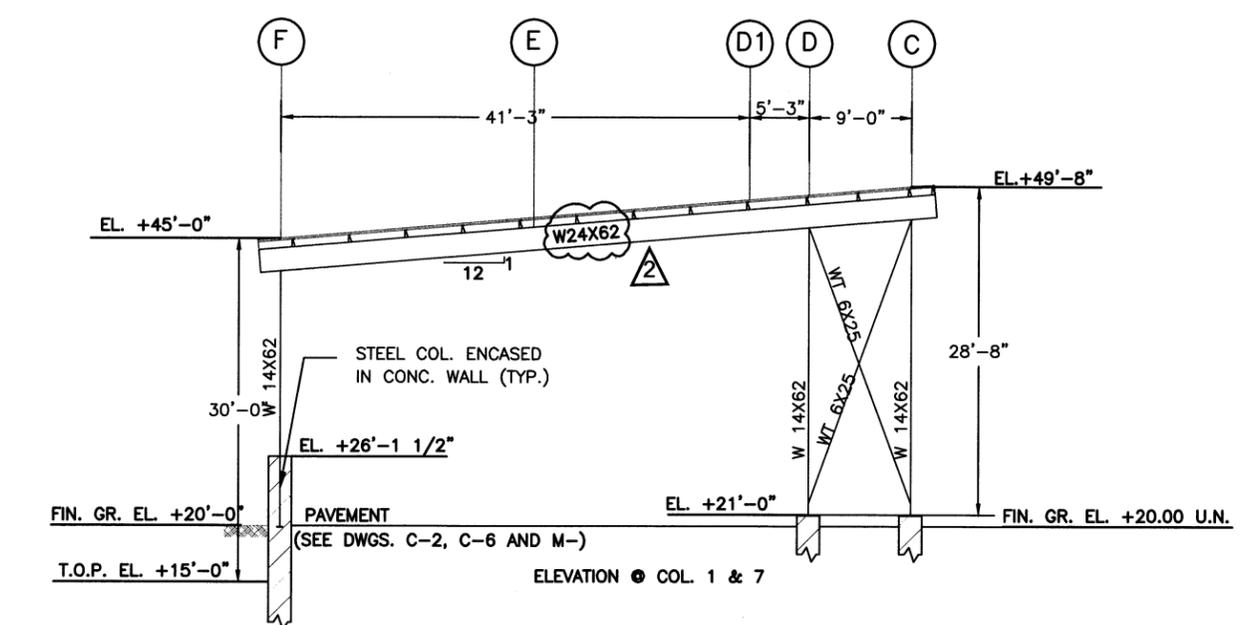
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ELEVATION @ COL. 3, 4 & 5



ELEVATION @ COL. 2 & 6



ELEVATION @ COL. 1 & 7

NOTES:

1. FOR FOUNDATION NOTES, SEE DWG. S-1.
2. PEDESTAL AND PILES NOT SHOWN FOR CLARITY. REFER TO S-2 AND S-3.
3. REFER TO S-9 AND S-14 FOR PEDESTAL DETAILS.
4. TOP OF DRILLED PIER ELEV. IS 15'-0" U.N.O.

NO.	DATE	REVISION	BY
7-28-16		ADDENDUM 2	RR
APAI NO.:	1102-003-04	DRAWN BY:	
ISSUE DATE:		CHECKED BY:	

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Date:
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Signature valid for six months.

RATNALA & BAHL, INC.
11767 KATY FREEWAY, SUITE 510
HOUSTON, TEXAS 77078

3/9/2016

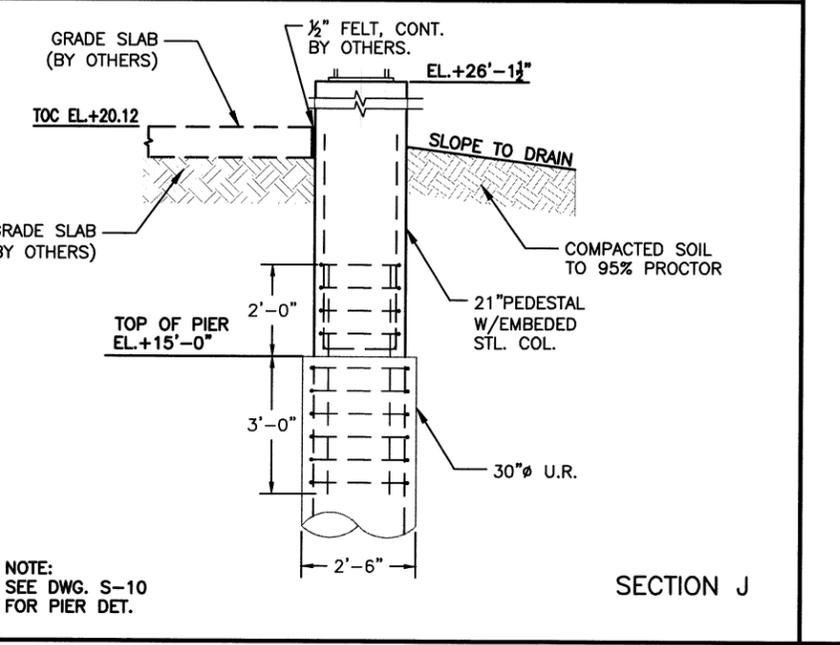
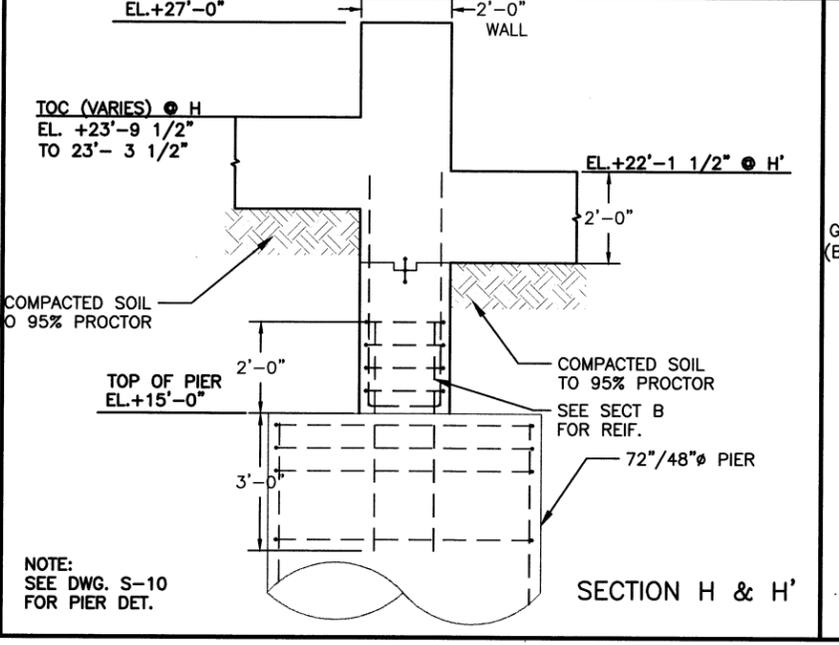
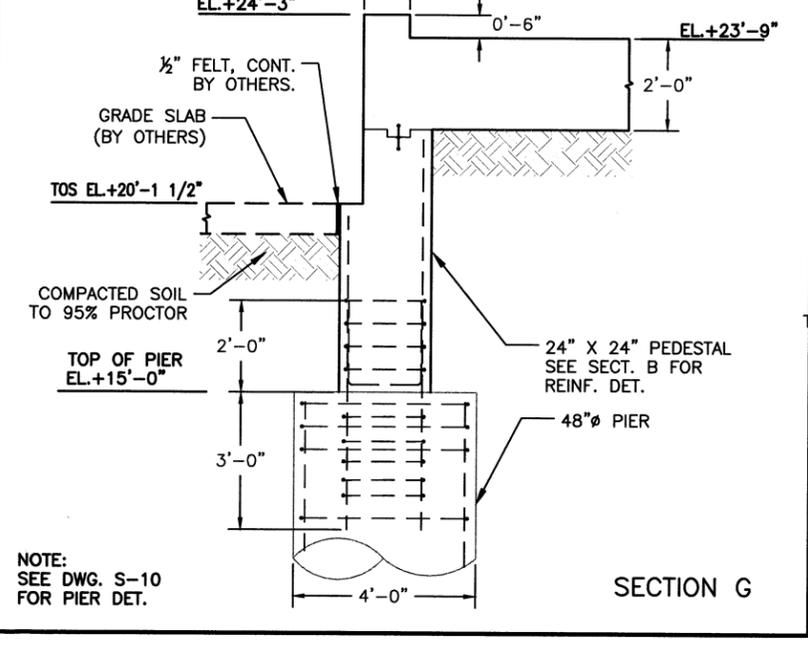
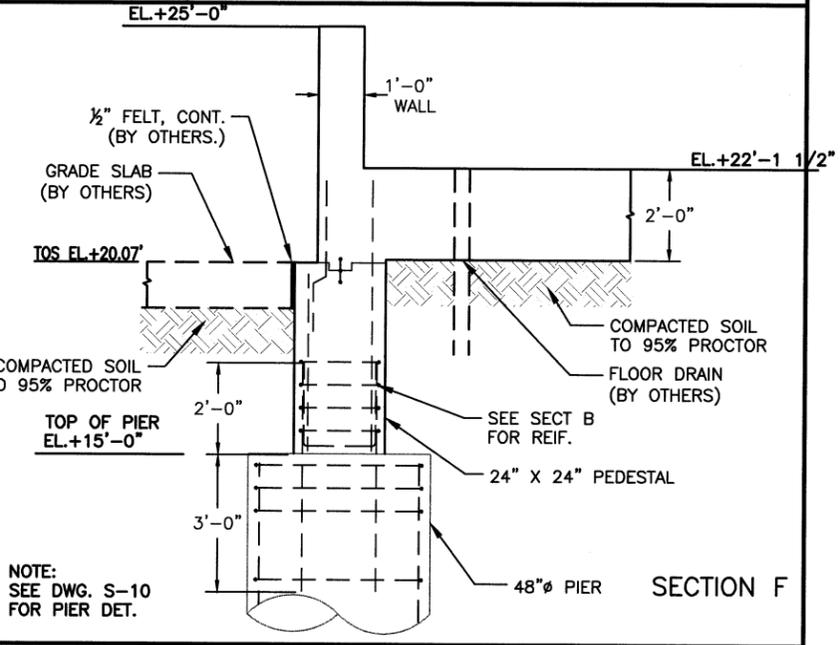
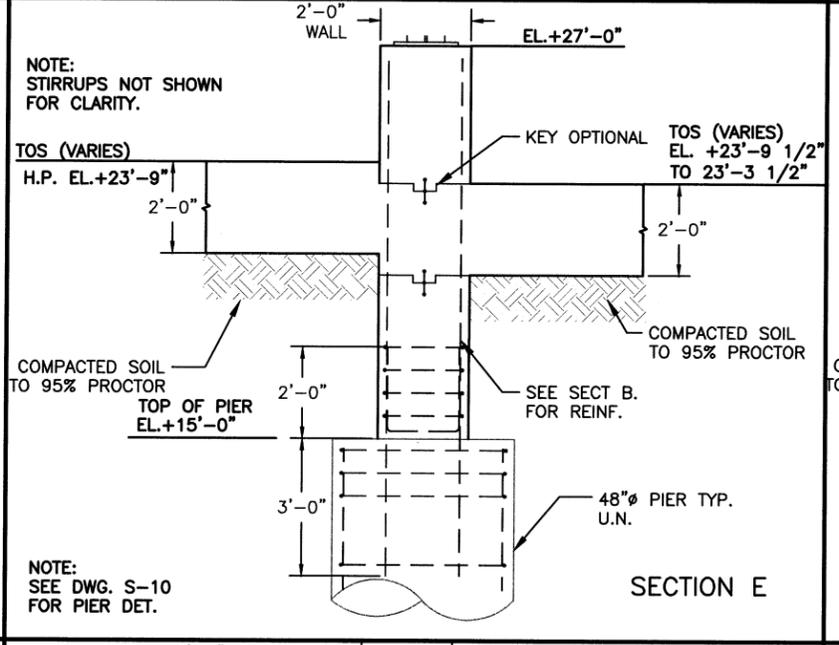
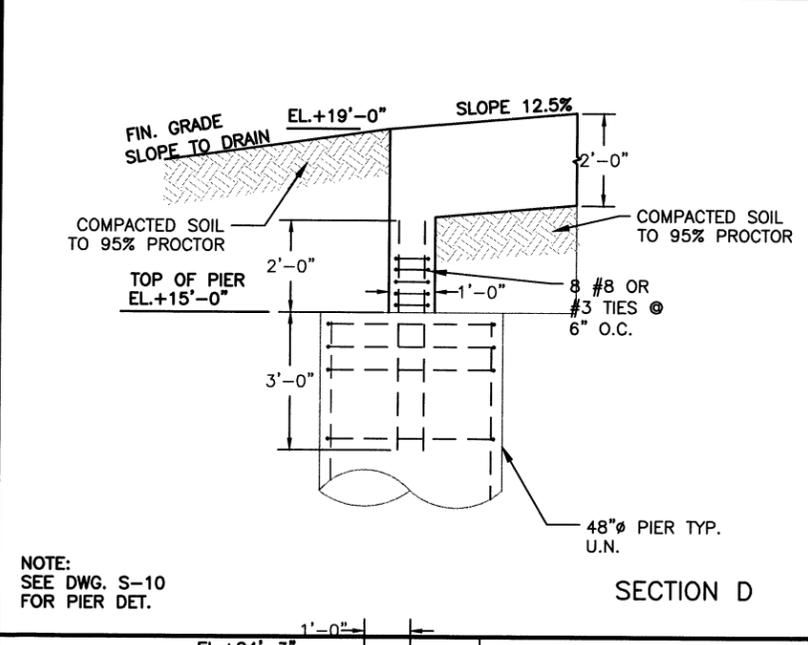
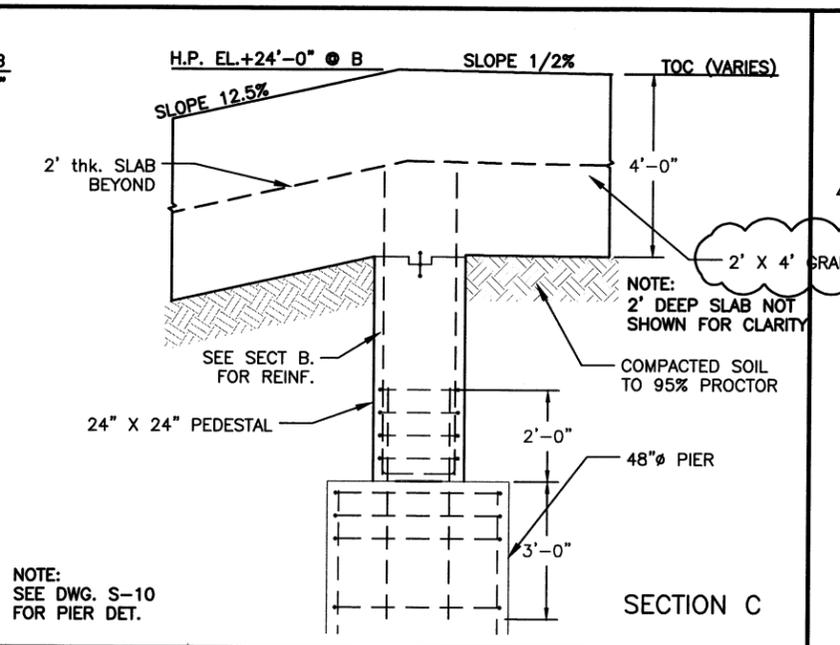
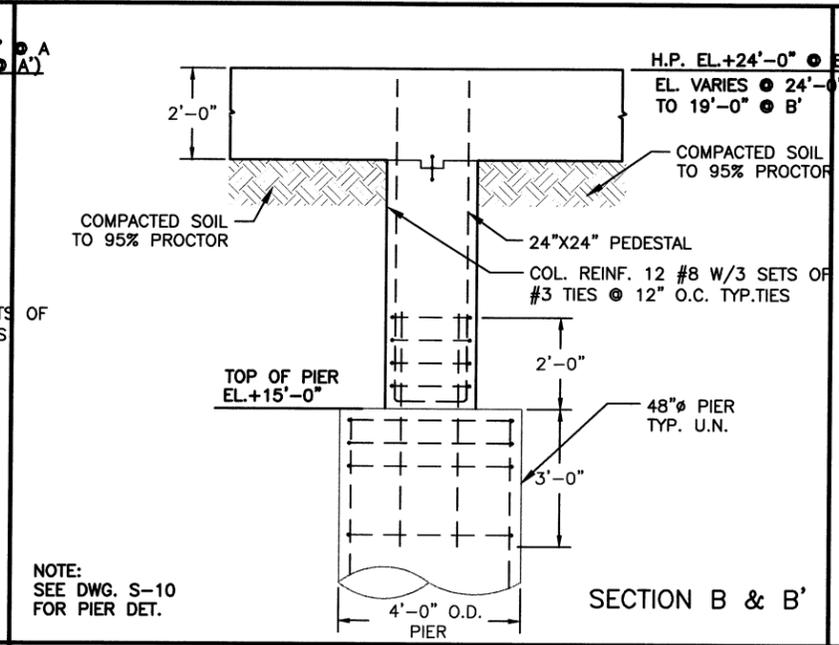
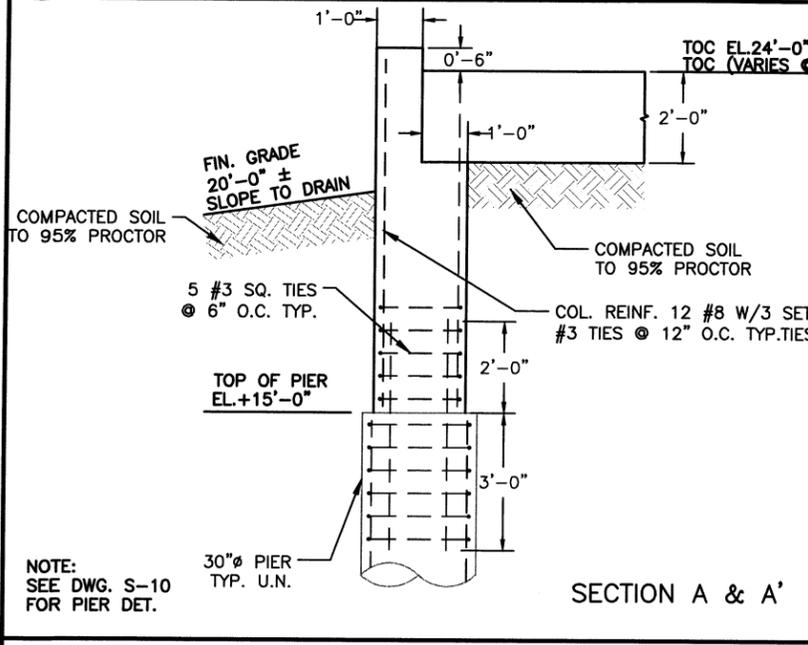
ALAN PLUMMER ASSOCIATES, INC.
ENVIRONMENTAL ENGINEERS AND SCIENTISTS
3100 WILCREST DRIVE, SUITE 270
HOUSTON, TEXAS 77042-6029
PHONE: 713-464-2724 FAX: 713-464-2725
TEXAS REGISTERED ENGINEERING FIRM F-13

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
SIMS NORTH WASTE & DEBRIS HANDLING STATION
TRANSVERSE ELEVATIONS

WBS NUMBER	FOR CITY OF HOUSTON USE ONLY
R-000265-0081-4	
DRAWING SCALE	
1/8" = 1'-0"	
CITY OF HOUSTON PM	
IRAJ M. RANJBAR, P.E.	
DWG NO.: S-8	
SHEET NO. 27 OF 41	

TRANSVERSE ELEVATIONS
SCALE 1/8"=1'-0"

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NOTE: 2' DEEP SLAB NOT SHOWN FOR CLARITY

7-28-16 ADDENDUM 2		RR
NO.	DATE	REVISION
APAI NO.: 1102-003-04	DRAWN BY:	
ISSUE DATE:	CHECKED BY:	

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RATNALA & BAHL, INC.
Engineers - Architects - Surveyors
11787 KATY FREEMAN, SUITE 510
HOUSTON, TEXAS 77079

11-19-2015

ALAN PLUMMER ASSOCIATES, INC.
ENVIRONMENTAL ENGINEERS AND SCIENTISTS
3100 WILCREST DRIVE, SUITE 270
HOUSTON, TEXAS 77042-6029
PHONE: 713-464-2724 FAX: 713-464-2725
TEXAS REGISTERED ENGINEERING FIRM F-13

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

SIMS NORTH WASTE & DEBRIS HANDLING STATION
CONCRETE DETAILS

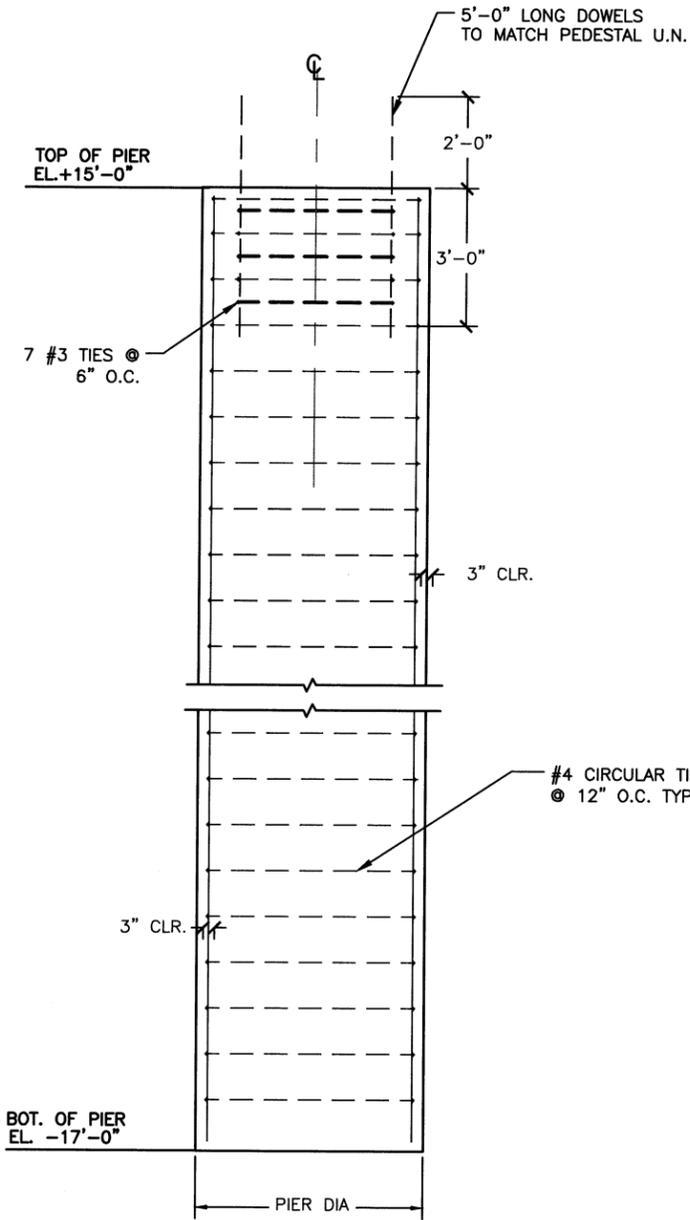
WBS NUMBER	FOR CITY OF HOUSTON USE ONLY
R-000265-0081-4	
DRAWING SCALE	
1/2" = 1'-0"	
CITY OF HOUSTON PM	
IRAJ M. RANJBAR, P.E.	
DWG NO.: S-9	
SHEET NO. 28 OF 41	

PRINTED: 7/18/2016 3:48 PM 1:2014 JOB\1402 - SIMS NORTH DEBRIS STATION WORKING FOLDER\3-9 Concrete Details.dwg SAVED: 7/18/2016 3:47 PM SAVER: BFC Ingrid USDR Ingrid

NOTES:

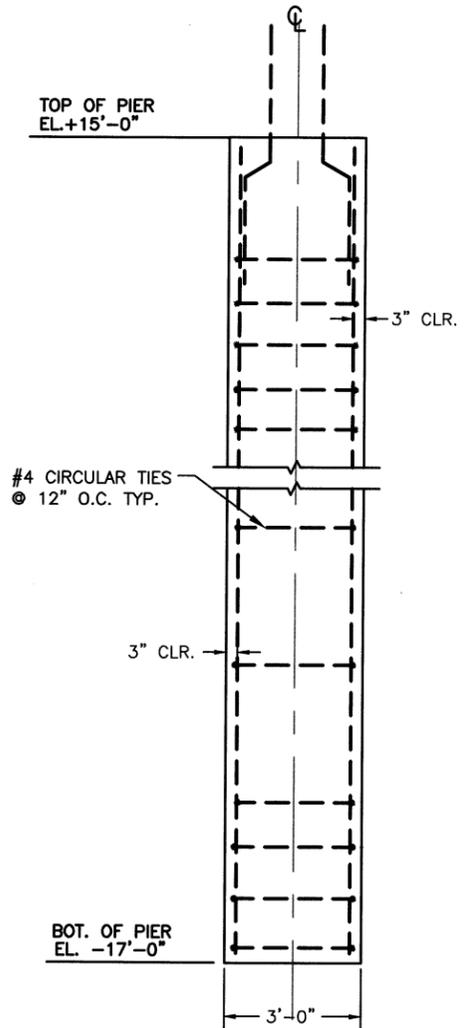
1. SEE DWG. S-1 FOR GENERAL NOTES.
2. SEE DWG. S-2 FOR FOUNDATION NOTES.
3. SEE DWG. S-2/S-3 FOR PIER DETAILS.
4. REFER TO DWG. S-9 FOR PEDESTAL DETAILS.

SCHEDULE OF PIER REINFORCEMENT		
PIER DIAMETER (IN.)	REBAR DIAMETER (#)	QUANTITY
30	6	18
36	6	24
48	6	44
72	8	54

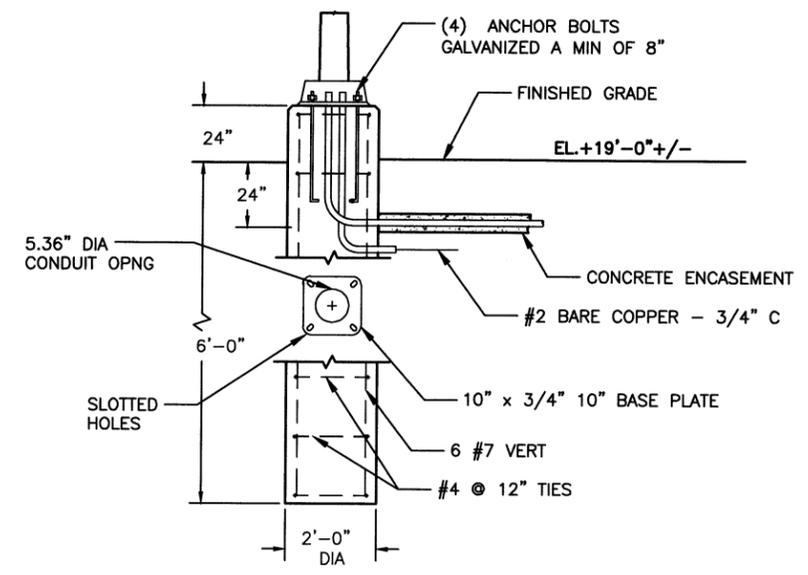


A TYPICAL PIER DETAIL
SCALE 1/2"=1'-0"

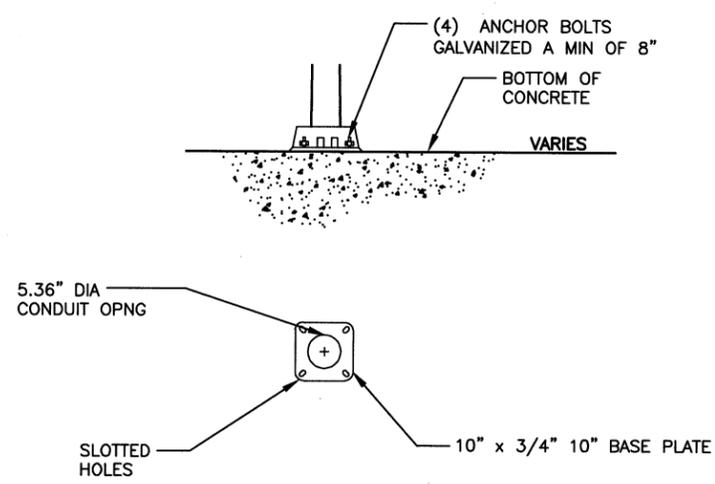
NOTE:
TYPICAL EXCEPT 2 COL. LINES 1&7/C&D



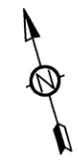
B PIER DETAIL ALONG C-F
SCALE 1"=1'-0"



C TYP. 1 LIGHT POLE BASE DETAIL
N T S



D TYP. 2 LIGHT POLE BASE DETAIL
N T S



NO.	DATE	REVISION	BY
7-28-16		ADDENDUM 2	RR
APAI NO.:	1102-003-04	DRAWN BY:	
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RATNALA & BAHL, INC.
11787 KATY FREEWAY, SUITE 510
HOUSTON, TEXAS 77079

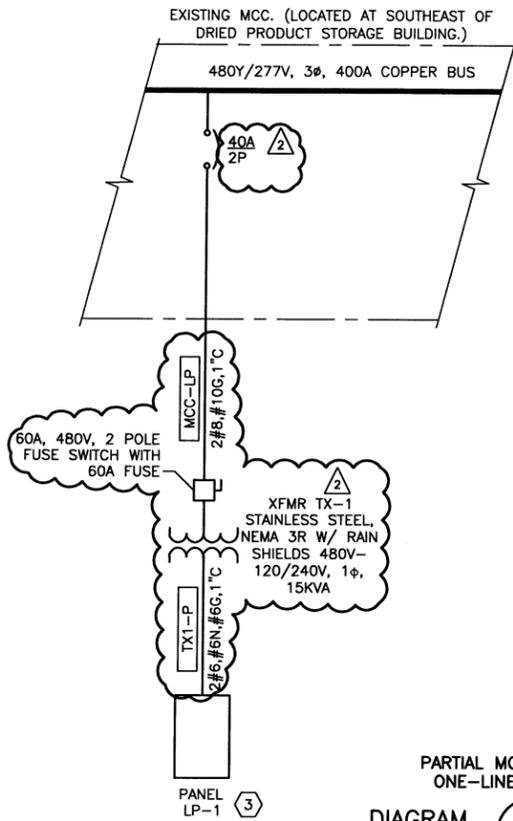
11-19-2015

ALAN PLUMMER ASSOCIATES, INC.
ENVIRONMENTAL ENGINEERS AND SCIENTISTS
3100 WILCREST DRIVE, SUITE 270
HOUSTON, TEXAS 77042-6029
PHONE: 713-464-2724 FAX: 713-464-2725
TEXAS REGISTERED ENGINEERING FIRM F-13

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
SIMS NORTH WASTE & DEBRIS HANDLING STATION
PILE DETAIL

WBS NUMBER	FOR CITY OF HOUSTON USE ONLY
R-000265-0081-4	
DRAWING SCALE	
AS SHOWN	
CITY OF HOUSTON PM	
IRAJ M. RANJBAR, P.E.	
DWG NO.: S-10	
SHEET NO. 29 OF 41	

PRINTED: 7/19/2016 3:49 PM I:\2014\06S11402-SIMS NORTH DEBRIS STATION\WORKING FOLDER\S-10 Pile Detail.dwg SAVED: 7/16/2016 3:49 PM USER: Ingrid



PARTIAL MCC ONE-LINE DIAGRAM 1

LOAD CALCULATION FOR 480V

ITEM	KVA	FLI*
15KV XFMR TX-1 80% LOAD	12	25A
SUBTOTAL		25A
25% OF LARGEST LOAD		6.25A
MINIMUM AMPACITY		31.25A

LOAD CALCULATION FOR 240V

ITEM	KVA	FLI*
15KV XFMR TX-1 80% LOAD	12	48A
SUBTOTAL		48A
25% OF LARGEST LOAD		12A
MINIMUM AMPACITY		60A



COVERED ELECTRICAL PANEL PHOTOGRAPH A



NEW BREAKER FOR LIGHTING PANEL LP-1

LIGHTING PANEL LP-1 PHOTOGRAPH B

PANELBOARD: LP-1

SERVICE: 120V/240V

MOUNTING: SURFACE - NEMA 4X

BUS TYPE: COPPER

BUS RATING: 100A

FEED: BOTTOM

MAINS: 60A MB

LOCATION: NEW OFFLOADING & DISPOSAL BUILDING

SPD: NONE

AVAILABLE FAULT CURRENT: 3.47KA (2)

CKT NO.	BRKR SIZE	WIRE SIZE	COND. SIZE	LOAD	LOAD	COND. SIZE	WIRE SIZE	BRKR SIZE	CKT NO.
1	20/1	12	3/4"	EXTERIOR CANOPY LIGHTS	SPARE	3/4"	12	20/1	2
3	20/1	12	3/4"	SPARE	SPARE	3/4"	12	20/1	4
5	20/1	12	3/4"	SPARE	SPARE	3/4"	12	20/1	6
7	20/1	12	3/4"	RECEPTACLE	SPARE	3/4"	12	20/1	8
9	20/1	12	3/4"	SITE LIGHTS	SITE LIGHTS	3/4"	12	20/1	10
11	20/1	12	3/4"	INTERIOR CANOPY LIGHTS	INTERIOR CANOPY LIGHTS	3/4"	12	20/1	12

PANELBOARD NOTES:

- CONDUIT SIZE SHOWN IS THE MINIMUM SIZE REQUIRED FOR INDIVIDUAL CIRCUITS. MULTIPLE CIRCUITS MAY BE COMBINED IN A SINGLE CONDUIT FOR FIELD ROUTING PROVIDED NEC MAXIMUM CONDUIT FILL IS NOT EXCEEDED.
- EACH SINGLE PHASE 120V CIRCUIT SHALL HAVE A SEPARATE NEUTRAL WIRE.

- NOTES:
- REFER TO E-4 FOR LOCATION AND WIRING SITE PLAN.
 - CONTRACTOR SHALL AFFIX A 2"x3" LABEL WITH BLUE LETTERING ON A CONTRASTING BACKGROUND ON THE EXTERIOR OF THE PANEL. THE LABEL SHALL DENOTE THE AVAILABLE FAULT CURRENT AND DATE OF CALCULATION.
 - GROUND PANEL ACCORDING TO NEC 250.45.

NO.	DATE	REVISION	BY
Δ 07-18-16		ADDENDUM NO.2	EC
APAI NO.:	1102-003-004	DRAWN BY:	JH
ISSUE DATE:	03-23-2016	CHECKED BY:	HF

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

NOTICE:

For your safety, you are required by Texas law to call 811 at least 48 hours before you dig so that underground lines can be marked. This verification does not fulfill your obligation to call 811.

VERIFICATION OF PRIVATE UTILITY LINES

Date

CenterPoint Energy / Natural Gas Facilities ONLY.

(This Signature verifies that you have shown CMP Natural Gas lines correctly - not to be used for conflict verification.) (See service lines are not shown.)

Signature Valid for six months.

Date

CenterPoint Energy / UNDERGROUND Electrical Facilities Verification ONLY.

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GAI
Gupta & Associates, Inc.
CONSULTING ENGINEERING
Registration No. F-2593

7322 Southwest Freeway, Suite 410
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ALAN FLUMMER ASSOCIATES, INC.
ENGINEERS AND ARCHITECTS
3100 WILLCREST DRIVE, SUITE 210
HOUSTON, TEXAS 77064-6029
PHONE: 713-464-2724 FAX: 713-464-2725
TEXAS REGISTERED ENGINEERING FIRM #7-13

STATE OF TEXAS
H. A. FOROUZAN
77748
REGISTERED PROFESSIONAL ENGINEER

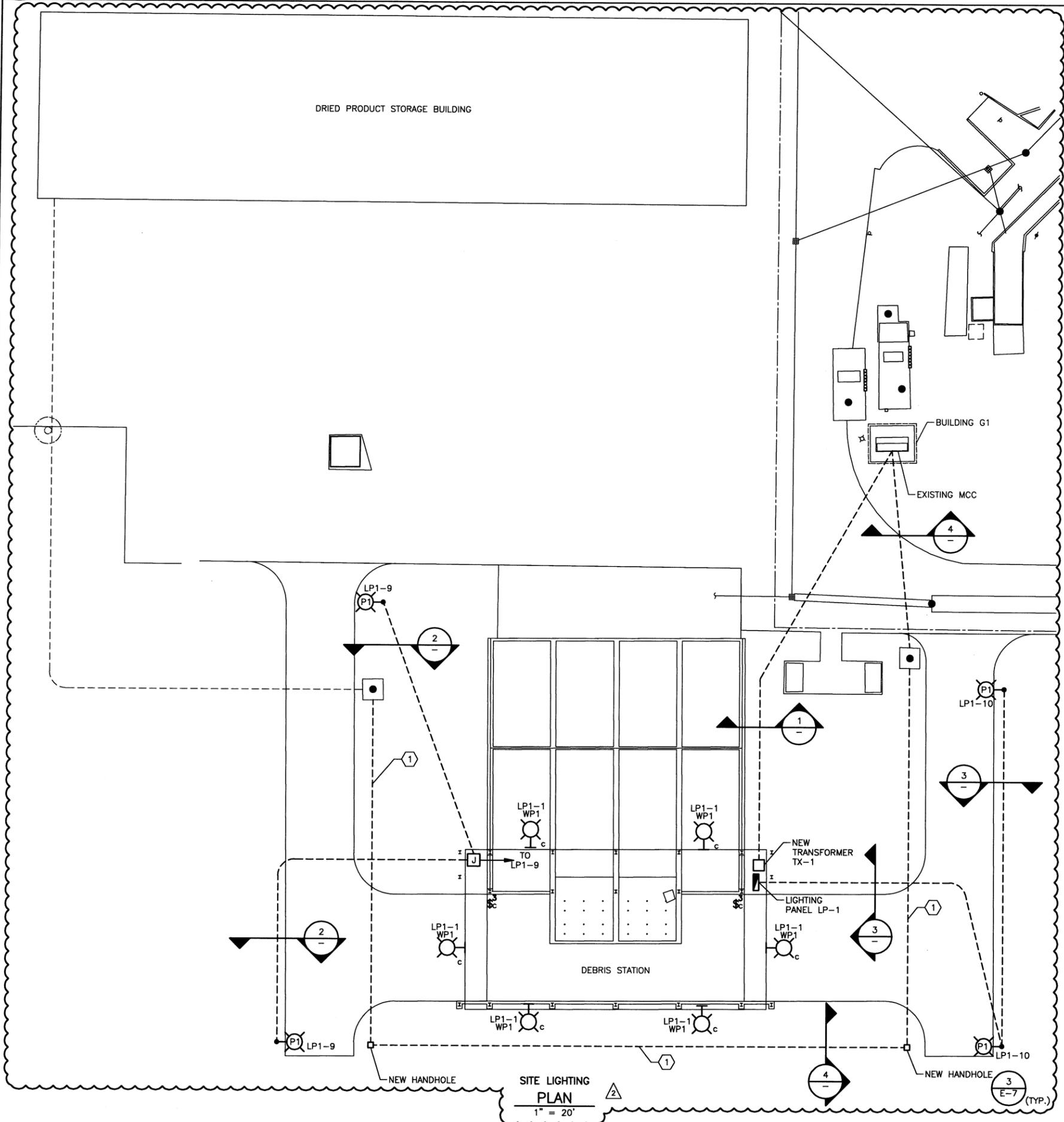
SURVEYED BY: AMANI
FB NO.: P-5900

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

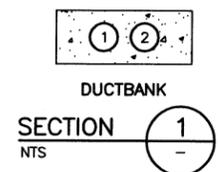
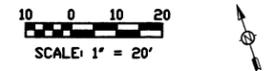
SIMS NORTH WASTE & DEBRIS HANDLING STATION
PARTIAL ONE-LINE DIAGRAM
ELECTRICAL

WBS NUMBER	FOR CITY OF HOUSTON USE ONLY
R-000265-0081-4	
DRAWING SCALE	
NONE	
CITY OF HOUSTON PM	
IRAJ M. RANJBAR, P.E.	
DWG NO.:	E-3
SHEET NO.36 OF 41	

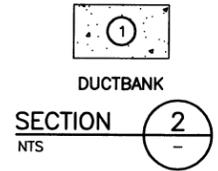
PRINTED: 7/20/2016 9:40 AM O:\H813_Houston - Wastewater Work Order Engineering\Construction Phase\Addendum No.1\H813-E-003.dwg USER: Justin Ho



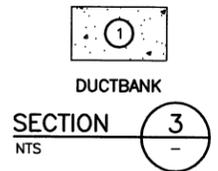
- NOTES:
- ① RECONNECT NEW FIBER TO EXISTING PANEL IN DRIED PRODUCT STORAGE BUILDING AND BUILDING G1.
 - ② FIBER OPTIC CABLE TO BE 12 PAIR MINIMUM.
 - ③ FIBER OPTIC CABLE TO BE A CONTINUOUS SEGMENT FROM BUILDING G-1 TO DRIED PRODUCT STORAGE BUILDING.



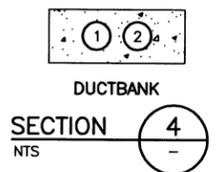
NO.	CONDUIT TAG	QTY	SIZE	WIRE SIZE
①	MCC-LP	1	1" C	3#8, #10G
②	SPARE	1	1" C	-



NO.	CONDUIT TAG	QTY	SIZE	WIRE SIZE
①	LP-9	1	1" C	2#10, #12G



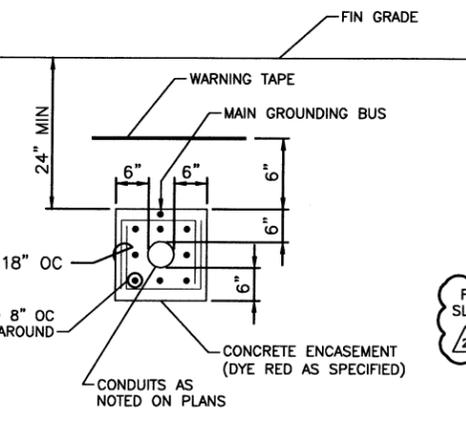
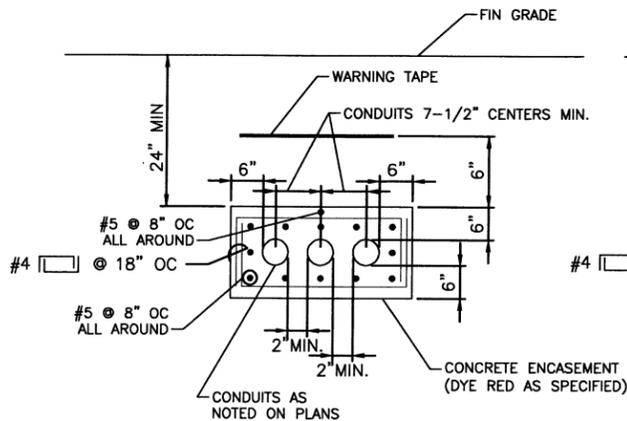
NO.	CONDUIT TAG	QTY	SIZE	WIRE SIZE
①	LP-10	1	1" C	2#12, #12G



NO.	CONDUIT TAG	QTY	SIZE	WIRE SIZE
①	FOC-1	1	3" C	12 STRAND
②	SPARE	1	3" C	-

07/19/18 ADDENDUM NO.2		EC
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1102-003-004	DRAWN BY: JH	
03-23-2016	CHECKED BY: HF	
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VERIFICATION OF PRIVATE UTILITY LINES		
Date		
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(This Signature verifies that you have shown CNP Natural Gas lines correctly - not to be used for conflict verification.) (Gas service lines are not shown.)		
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GAI Gupta & Associates, Inc. CONSULTING ENGINEERING Registration No. F-2593		
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SURVEYED BY: AMANI FB NO.: P-5900		
CITY OF HOUSTON DEPARTMENT OF PUBLIC WORKS AND ENGINEERING SIMS NORTH WASTE & DEBRIS HANDLING STATION LIGHTING SITE PLAN		
ELECTRICAL		
WBS NUMBER	FOR CITY OF HOUSTON USE ONLY	
R-000265-0081-4		
DRAWING SCALE		
1" = 20'		
CITY OF HOUSTON PM		
IRAJ M. RANJBAR, P.E.		
DWG NO.: E-5		
SHEET NO. 38 OF 41		

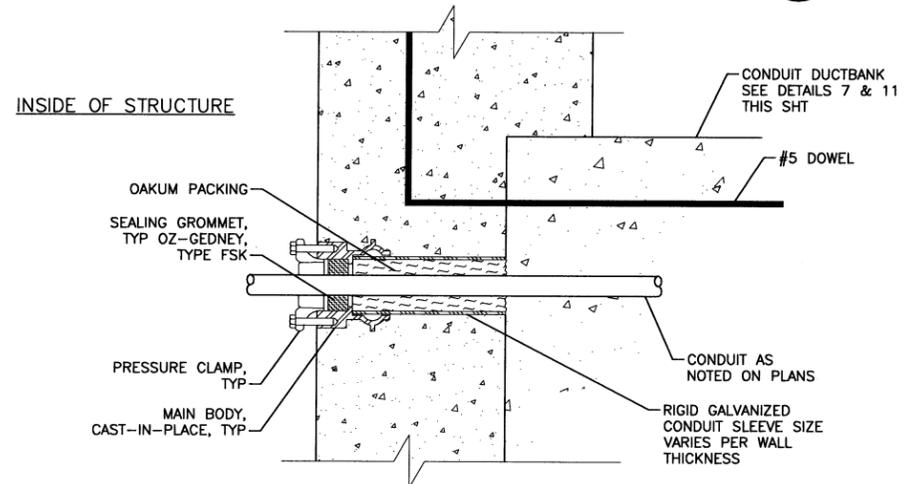
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TYP MULTI-CONDUIT DUCTBANK SECTION
NOTE: TIE MAIN GROUNDING BUS TO REBAR AT A MAXIMUM INTERVAL OF EVERY 20 FEET.

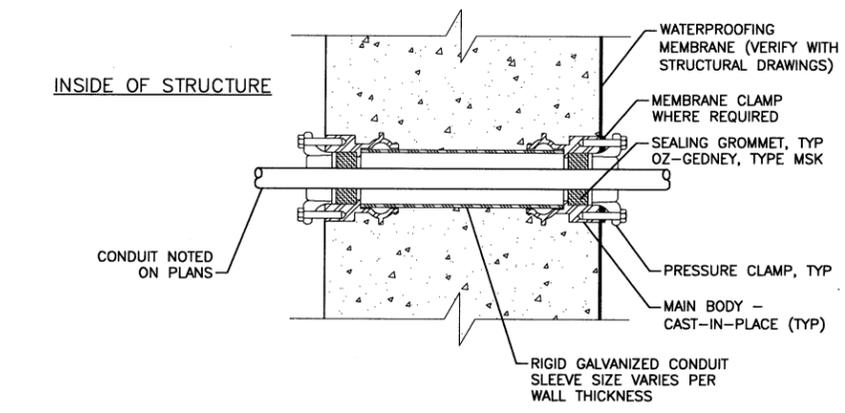
TYP SINGLE-CONDUIT DUCTBANK SECTION

DETAIL 1



NOTE: WALL SEAL SHOWN IS TYPICAL FOR EACH CONDUIT IN DUCTBANK.

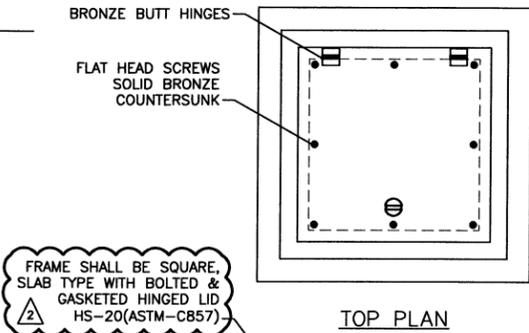
SINGLE ENDED TYPE
FOR USE WHERE CONDUIT OUTSIDE THE STRUCTURE IS ENCASED IN CONCRETE



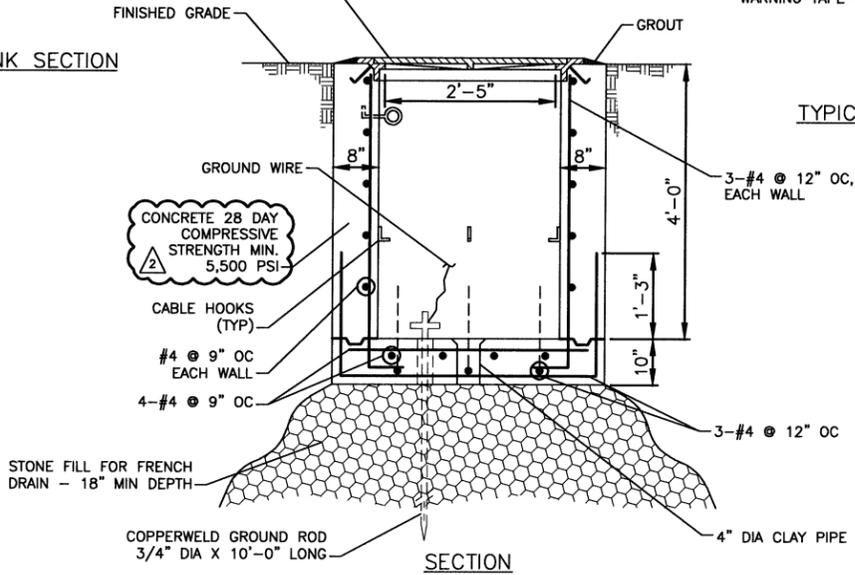
DOUBLE ENDED TYPE WITH MEMBRANE
FOR USE WHERE CONDUIT OUTSIDE THE STRUCTURE IS NOT ENCASED IN CONCRETE

TYPICAL CONDUIT SEALS

DETAIL 4

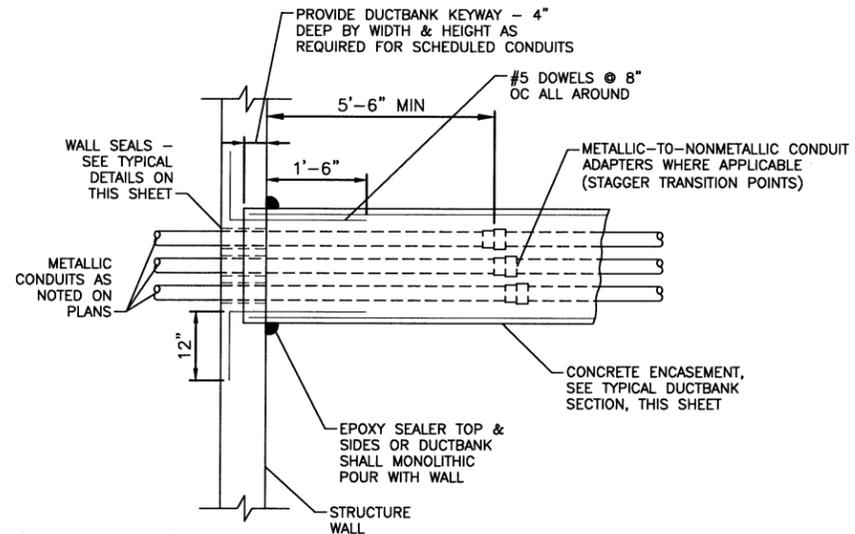


FRAME SHALL BE SQUARE, SLAB TYPE WITH BOLTED & GASKETED HINGED LID HS-20(ASTM-C857)



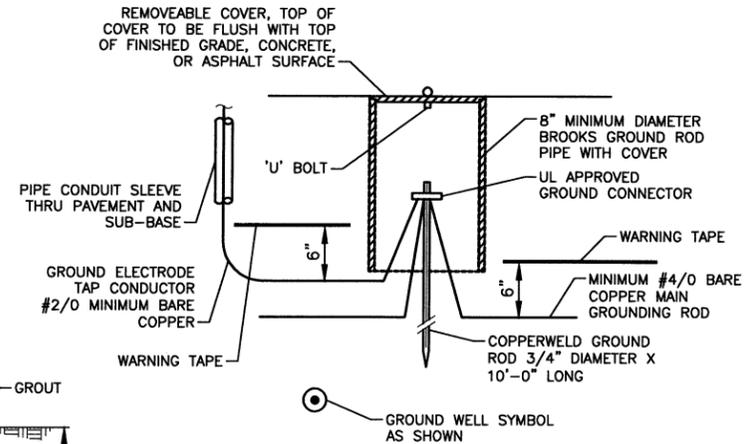
TYPICAL ELECTRICAL HANDHOLE CONSTRUCTION

DETAIL 3



TYP DUCTBANK ENTRANCE AT STRUCTURE WALL

DETAIL 5



TYPICAL GROUND ROD AND WELL INSTALLATION

DETAIL 2

GROUND CONNECTOR SCHEDULE	
WIRE SIZE	BURNDY
#2 AWG	GAR 6426
#2/0 AWG	GAR 6426
#4/0 AWG	GAR 6429
500 kcmil	GAR 6434

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