CONSTRUCTION NOTES:

1. Storm sewer pipe, 18–inch diameter or larger shall be reinforced concrete meeting A.S.T.M., C–76, Class III. Bedding, backfilling and installation of pipe and construction of appurtenances shall be in accordance with City of Sugar Land and MUD Standards.

2. Storm sewer pipe shall be High Density Polyethylene (HDPE) Corrugated Thermoplastic Pipe having a smooth interior and annular exterior corrugations meeting ASTM F2648. Pipe shall be joined using a bell & spigot joint meeting ASTM F2648 & F477. Gaskets shall be installed by the pipe manufacturer and covered with a removable wrap to insure the gasket is free from debris. Fittings shall conform to ASTM F2306. See pipe manufacturer design manual for complete installation standards & specifications. Bedding, backfilling and installation of pipe and construction of appurtenances shall be in accordance with City of Sugar Land and MUD requirements.

3. Sanitary sewer shall be PVC (Poly–Vinyl Chloride) pipe meeting A.S.T.M. Specifications, D–3034–73 and having a S.D.R. of 26, or as noted. Bedding, backfilling and installation of pipe and construction of appurtenances shall be in accordance with City of Sugar Land and MUD Specs.

4. Water lines shall be PVC (Poly–Vinyl Chloride) pipe conforming to A.W.W.A. C–900 PVC, Class 150 or Schedule 40 PVC or per City of Sugar Land and MUD requirements.

5. Contractor shall provide adequate thrust blocking to withstand test pressure as required by City of Sugar Land and MUD.

6. All utilities presented on these drawings are shown at the approximate locations based on the best available information. The Contractor shall field determine the exact locations prior to commencing construction. he shall be fully responsible for any and all damages caused by his failure to exactly locate and maintain these underground utilities.

7. Contractor shall uncover existing utilities at all points of crossing to determine if conflict exists before commencing any construction. Notify the Engineer at once of any conflict.

8. Where concrete curb or walk is indicated, elevation shall be 6 inches above top of pavement elevation shown. Coordinate with architectural site plan.

9. All fill, compaction and subgrade preparation shall be in accordance with soil report specifications.

10. All sewers under or within one (1) foot of proposed or future pavement shall be backfilled with 1–1/2 sack cement stabilized sand to within one (1) foot of subgrade.

11. The work area shall be barricaded and illuminated during darkness and periods of inactivity, when in an area of direct public access.

12. Contractor shall provide sheeting, shoring and bracing as necessary to protect workmen and existing utilities during all phases of construction.

13. Utilities are to be taken to within five (5) feet of building. See plumbing sheets indicated for continuation of service connections into building.

14. Contractor shall be responsible for protecting, maintaining, and restoring all drainage system.

15. All finished grades shall vary uniformly between finished elevations shown.

16. Some of the existing underground utilities shown hereon have not been field verified.

17. Contractor is to notify all utility companies to verify location and depth of all existing utility lines.

18. Contractor to obtain all permits required by all governing agencies.

19. Contractor to co–ordinate with architects and M.E.P. drawings for connection and location of all downspouts and all plumbing utilities.

21. Overhead lines may exist on the property. We have not attempted to mark those lines since they are clearly visible, but you should locate them prior to beginning any construction. Texas law, Section 752, Health & Safety Code, forbids all activities in which persons or things MAY come within six (6) feet of live overhead high voltage lines. Parties responsible for the work,including contractors, are l 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 moved, Reliant Energy H.L.&P. at 713–207–7777.

21. Contractor shall provide and install traffic control devices in conformance with Part VI of the Texas Manual on Uniform Traffic Control Devices (Texas M.U.T.C.D. most recent edition with revisions) during construction.

23. Caution: UNDERGROUND GAS FACILITIES

Entex main lines (to include Unit Gas Transmission, and/or Industrial Gas Supply Corporation where applicable) are shown in an approximate location ONLY. Service lines are usually not shown. The contractor shall contact the Utility Coordinating Committee at 713–223–4567 or 1–800–669–8344 a minimum of 48 hours prior to construction to have main and service lines field located.

* When Reliant Energy Entex pipe line markings are NOT visible, call 713–967–8037 (7:00a.m.to 4:30p.m.) for status of line location request before excavation begins.

* When excavating within eighteen inches (18") of the indicated location of Reliant Energy Entex facilities, all excavation must be accomplished using NON–mechanized excavating procedures.

* When Reliant Energy Entex facilities are exposed, sufficient support must be provided to thefacilities to prevent excessive stress on the piping.

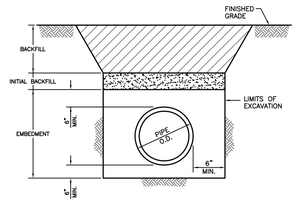
23. Southwestern Bell Telephone Co. utilities may exist in street right of way. The contractor shall determine the exact location before commencing work. He agrees to be fully responsible for any and all damages which might be occasioned by his failure to exactly locate and preserve these underground utilities.

24. All existing power poles, light standards, signs, etc. which affect the proposed construction, shall be removed and/or relocated as required whether shown on drawings or not.

25. The Contractor shall provide a trench safety system to meet appropriate requirements established in Occupational Safety and Health Administration (OSHA) Safety & Health Regulations, 29 CFR 1926, Subpart P – Excavations, Trenching and Shoring, and OSHA s proposed standards on trenching, excavation published in Volume 52, No. 72 of the Federal Register, April 15, 1987, Pages 12288–12339. Should the referenced OSHA standards be modified or amended, the more stringent requirements shall apply.

26. Existing elevations and/or utility information were taken from a survey prepared by Tejas Surveying, Inc., (281) 240–9099, dated 08–11–2011, Job No. 04–1105.

NOTE:
ALL FILL COMPACTION, PAVING AND SUBGRADE PREPARATION SHALL BE IN ACCORDANCE WITH SOILS REPORT SPECIFICATIONS.



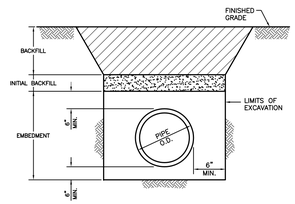

NOTES:
1. BACKFILL SHALL BE NATIVE SOIL, FREE OF DEBRIS, COMPACTED TO 95% STANDARD PROCTOR DENSITY, EXCEPT AS REQUIRED UNDER PAVEMENT.
2. INITIAL BACKFILL SHALL BE UNIFORMLY GRADED MATERIAL (MAXIMUM SIZE, 3" DIAMETER), PLACED IN 8" LIFTS AND COMPACTED TO 95% STANDARD PROCTOR DENSITY, EXCEPT AS REQUIRED UNDER PAVEMENT.
3. EMBEDMENT SHALL BE CEMENT STABILIZED SAND (1.5 SACKS PER CUBIC YARD) COMPACTED TO 95% STANDARD PROCTOR DENSITY.
4. UNDER PAVING OR WITHIN 3' OF PAVEMENT, THE INITIAL BACKFILL AND ALL BACKFILL UP TO THE PAVEMENT SUBGRADE SHALL BE CEMENT STABILIZED SAND (1.5 SACKS PER CUBIC YARD) COMPACTED TO 95% STANDARD PROCTOR DENSITY.
5. TRENCH SHORING IN ACCORDANCE WITH OSHA, SHALL BE INSTALLED WHERE REQUIRED.
6. SOIL IN THE PIPE ZONE SHALL CONSIST OF NON–WATERBEARING, COHESIVE SOILS WITH A SHEAR STRENGTH OF 1000 PSF OR GREATER. WHEN WET SAND EXISTS IN THE PIPE ZONE, MODIFIED BEDDING SHALL BE INSTALLED.

## STORM SEWER BEDDING AND BACKFILL
N.T.S.



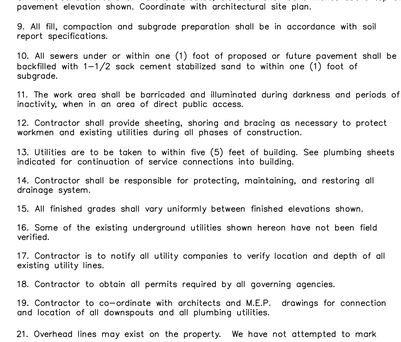

NOTES:
1. BACKFILL SHALL BE NATIVE SOIL, FREE OF DEBRIS, PLACED IN LIFTS, 8" THICK OR LESS, COMPACTED TO 95% STANDARD PROCTOR DENSITY, EXCEPT AS REQUIRED UNDER PAVEMENT.
2. BACKFILL UNDER PAVEMENT AND PUBLIC STREETS SHALL BE CEMENT STABILIZED SAND (1.5 SACKS OF CEMENT PER CUBIC YARD OF SAND), COMPACTED TO 95% STANDARD PROCTOR DENSITY.
3. TRENCH SHORING, IN ACCORDANCE WITH OSHA, SHALL BE INSTALLED AS REQUIRED.

## FIRE/WATER MAIN BEDDING AND BACKFILL
N.T.S.

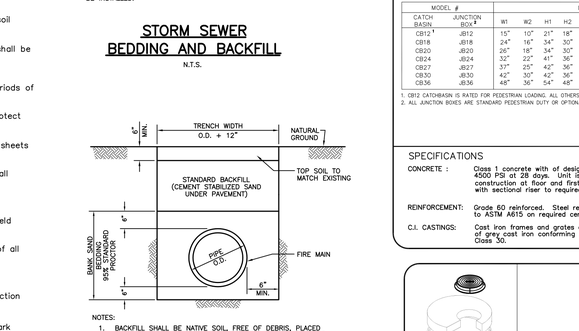



NOTES:
1. BACKFILL SHALL BE NATIVE SOIL, FREE OF DEBRIS, COMPACTED TO 95% STANDARD PROCTOR DENSITY, EXCEPT AS REQUIRED UNDER PAVEMENT.
2. INITIAL BACKFILL SHALL BE UNIFORMLY GRADED MATERIAL (MAXIMUM SIZE, 3" DIAMETER), PLACED IN 8" LIFTS AND COMPACTED TO 95% STANDARD PROCTOR DENSITY, EXCEPT AS REQUIRED UNDER PAVEMENT.
3. EMBEDMENT SHALL BE CEMENT STABILIZED SAND (1.5 SACKS PER CUBIC YARD) COMPACTED TO 95% STANDARD PROCTOR DENSITY.
4. UNDER PAVING OR WITHIN 3' OF PAVEMENT, THE INITIAL BACKFILL AND ALL BACKFILL UP TO THE PAVEMENT SUBGRADE SHALL BE CEMENT STABILIZED SAND (1.5 SACKS PER CUBIC YARD) COMPACTED TO 95% STANDARD PROCTOR DENSITY.
5. TRENCH SHORING IN ACCORDANCE WITH OSHA, SHALL BE INSTALLED WHERE REQUIRED.
6. SOIL IN THE PIPE ZONE SHALL CONSIST OF NON–WATERBEARING, COHESIVE SOILS WITH A SHEAR STRENGTH OF 1000 PSF OR GREATER. WHEN WET SAND EXISTS IN THE PIPE ZONE, MODIFIED BEDDING SHALL BE INSTALLED.

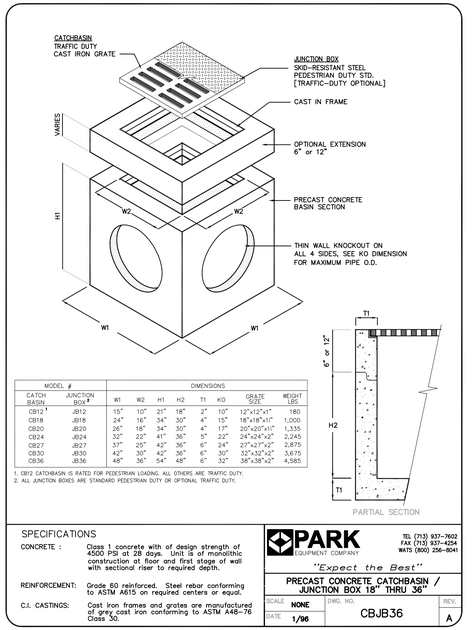
## CLASS "A–A" SANITARY SEWER BEDDING AND BACKFILL
N.T.S.




## LANDSCAPE FRENCH DRAIN DETAIL
N.T.S.
IF REQUIRED




## STORM SEWER CHOKE OUTFALL RESTRICTOR
N.T.S.




| MODEL # | | DIMENSIONS | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| CATCH BASIN | JUNCTION BOX | W1 | W2 | H1 | H2 | T1 | KO | GRATE SIZE | WEIGHT LBS |
| CB12 [1] | JB12 | 15" | 10" | 21" | 18" | 2" | 10" | 12"x12"x1" | 180 |
| CB18 | JB18 | 24" | 16" | 34" | 30" | 4" | 15" | 18"x18"x1" | 1,000 |
| CB20 | JB20 | 26" | 18" | 34" | 30" | 4" | 17" | 20"x20"x1" | 1,335 |
| CB24 | JB24 | 32" | 22" | 41" | 36" | 5" | 22" | 24"x24"x2" | 2,245 |
| CB27 | JB27 | 37" | 25" | 42" | 36" | 6" | 24" | 27"x27"x2" | 2,875 |
| CB30 | JB30 | 42" | 30" | 42" | 36" | 6" | 30" | 32"x32"x2" | 3,675 |
| CB36 | JB36 | 48" | 36" | 54" | 48" | 6" | 32" | 38"x38"x2" | 4,585 |

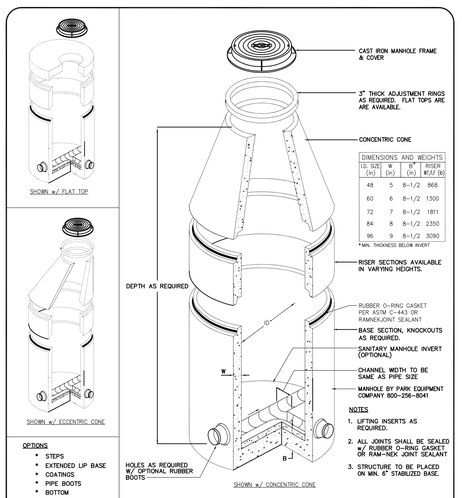
1. CB12 CATCHBASIN IS RATED FOR PEDESTRIAN LOADING. ALL OTHERS ARE TRAFFIC DUTY.
2. ALL JUNCTION BOXES ARE STANDARD PEDESTRIAN DUTY OR OPTIONAL TRAFFIC DUTY.

SPECIFICATIONS
CONCRETE : Class 1 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.
REINFORCEMENT: Grade 60 reinforced. Steel rebar conforming to ASTM A615 on required centers or equal.
C.I. CASTINGS: Cast iron frames and grates are manufactured of grey cast iron conforming to ASTM A48–76 Class 30.

PARK EQUIPMENT COMPANY
TEL (713) 937–7602
FAX (713) 937–4254
WATS (800) 256–8041
"Expect the Best"

PRECAST CONCRETE CATCHBASIN / JUNCTION BOX 18" THRU 36"

| SCALE | DWG. NO. | REV. |
|---|---|---|
| NONE | CBJB36 | A |
| DATE 1/96 | | |




| DIMENSIONS AND WEIGHTS | | | |
|---|---|---|---|
| I.D. SIZE (in) | W (in) | B* (in) | RISER #/LF (lb) |
| 48 | 5 | 8–1/2 | 868 |
| 60 | 6 | 8–1/2 | 1300 |
| 72 | 7 | 8–1/2 | 1811 |
| 84 | 8 | 8–1/2 | 2350 |
| 96 | 9 | 8–1/2 | 3090 |

* MIN. THICKNESS BELOW INVERT

NOTES
1. LIFTING INSERTS AS REQUIRED.
2. ALL JOINTS SHALL BE SEALED w/ RUBBER O–RING GASKET OR RAM–NEK JOINT SEALANT
3. STRUCTURE TO BE PLACED ON MIN. 6" STABILIZED BASE.

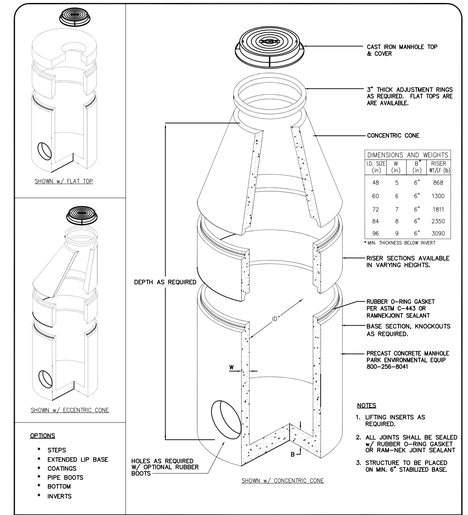
OPTIONS
- STEPS
- EXTENDED LIP BASE
- COATINGS
- PIPE BOOTS
- BOTTOM
- INVERTS

Specifications
CONCRETE : Class 1 concrete with of design strength of 4500 PSI at 28 days. Rated for H–20 loading.
REINFORCEMENT: Structural reinforcement conforming to ASTM–C–478.
C.I. CASTINGS: Cast iron frames and grates are manufactured of grey cast iron conforming to ASTM A48–76 Class 30.

PARK EQUIPMENT COMPANY
TEL (713) 937–7602
FAX (713) 937–4254
WATS (800) 256–8041
"Expect the Best"

PRECAST CONCRETE MANHOLE FOR SANITARY SEWER

| SCALE | DWG. NO. | REV. |
|---|---|---|
| NONE | PCMHIN–6 | A |
| DATE 5/97 | | |




| DIMENSIONS AND WEIGHTS | | | |
|---|---|---|---|
| I.D. SIZE (in) | W (in) | B* (in) | RISER #/LF (lb) |
| 48 | 5 | 6" | 868 |
| 60 | 6 | 6" | 1300 |
| 72 | 7 | 6" | 1811 |
| 84 | 8 | 6" | 2350 |
| 96 | 9 | 6" | 3090 |

* MIN. THICKNESS BELOW INVERT

NOTES
1. LIFTING INSERTS AS REQUIRED.
2. ALL JOINTS SHALL BE SEALED w/ RUBBER O–RING GASKET OR RAM–NEK JOINT SEALANT
3. STRUCTURE TO BE PLACED ON MIN. 6" STABILIZED BASE.

OPTIONS
- STEPS
- EXTENDED LIP BASE
- COATINGS
- PIPE BOOTS
- BOTTOM
- INVERTS

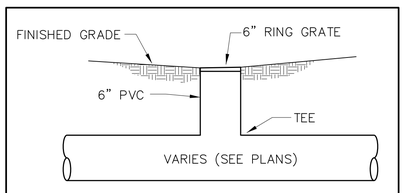
Specifications
CONCRETE : Class 1 concrete with of design strength of 4500 PSI at 28 days. Rated for H–20 loading.
REINFORCEMENT: Structural reinforcement conforming to ASTM–C–478.
C.I. CASTINGS: Cast iron frames and grates are manufactured of grey cast iron conforming to ASTM A48–76 Class 30.

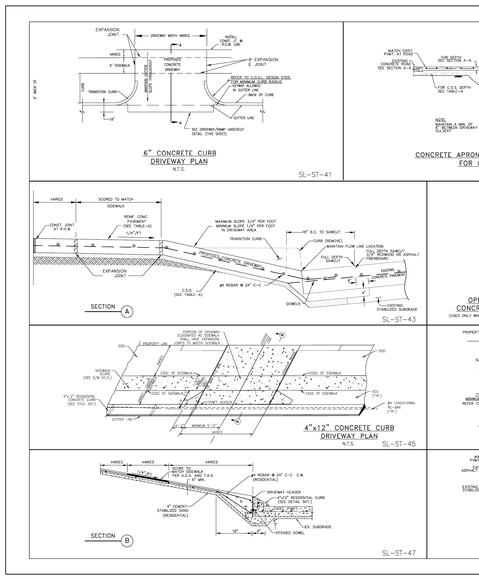
PARK EQUIPMENT COMPANY
TEL (713) 937–7602
FAX (713) 937–4254
WATS (800) 256–8041
"Expect the Best"

PRECAST CONCRETE MANHOLE FOR STORM SEWER

| SCALE | DWG. NO. | REV. |
|---|---|---|
| NONE | PCMHST–1 | A |
| DATE 5/97 | | |

## 6" CIRCULAR DRAIN DETAIL
N.T.S.




CITY OF SUGAR LAND, TEXAS ENGINEERING DEPARTMENT

CONSTRUCTION PLANS FOR:

DRIVEWAY CONSTRUCTION DETAILS

| CAD file: | |
|---|---|
| DESIGNED BY: | |
| DRAWN BY: | |
| CHECKED BY: | |
| DATE: | SHEET OF |

SHEET SL–25

# Optimum Personal Care Assisted Living Facilities

XXX Lakeview Drive
Sugar Land, Texas 77478


Radian
ARCHITECTURE
134 Eldridge Road Suite A
Sugar Land, Texas 774478
TEL (713) 933–0507
FAX (713) 933–0512


| # | Date | Description |
|---|---|---|
| 1 | 12.10.12 | SCHEMATIC DESIGN |

TEXAS ENGINEERING & MAPPING CO.
REGISTRATION # F–2906
THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF INTERIM REVIEW UNDER THE AUTHORITY OF CARLOS J. BARILLAS, P.E. 50474 ON 03–28–13. IT IS NOT TO BE USED FOR CONSTRUCTION PURPOSES.

# C-7 NOTES & DETAILS

Scale 1" = 30' JOB NO: 130–2

SEE SHT C–0 FOR TOPOGRAPHIC SURVEY
SEE SHT C–1 FOR GRADING & DRAINAGE
SEE SHT C–2 FOR STORM SEWER LAYOUT
SEE SHT C–3 FOR DRAINAGE AREA MAP
SEE SHT C–4 FOR SANITARY & WATER LAYOUT
SEE SHT C–5 FOR PAVING JOINT LAYOUT
SEE SHT C–6 FOR SWPPP & DETAILS
SEE SHT C–7 FOR NOTES & DETAILS
SEE SHT C–8 FOR P&P OVERALL
SEE SHT C–9 FOR PUBLIC STORM P&P
SEE SHT SL–01 FOR GENERAL CONSTRUCTION NOTES I
SEE SHT SL–02 FOR GENERAL CONSTRUCTION NOTES II
SEE SHT SL–03 FOR STORM SEWER MANHOLE DETAILS
SEE SHT SL–04 FOR STORM SEWER MANHOLE DETAILS
SEE SHT SL–05 FOR STORM SEWER CONSTRUCTION NOTES
SEE SHT SL–20 FOR STORM SEWER PIPE BEDDING & BACKFILL DETAILS


TEXAS ENGINEERING AND MAPPING
12810 CENTURY DRIVE
STAFFORD, TEXAS 77477
PHONE: (281) 491–2525 FAX: (281) 491–2535


Project No.1201.31

NOTES + DETAILS

Sheet No.

C-7