

UTILITY INFORMATION

WATER

OWNER ST. CHARLES PWSID NO. 2
 REPRESENTATIVE JEFF BLECKMAN, P.E.
 ADDRESS 100 WATER DRIVE
 P.O. BOX 370
 OFALLON, MO. 63366-0370
 PHONE (636) 581-3737 EXT. 120

SEWER

OWNER ST. CHARLES PWSID NO. 2
 REPRESENTATIVE JEFF BLECKMAN, P.E.
 ADDRESS 100 WATER DRIVE
 P.O. BOX 370
 OFALLON, MO. 63366-0370
 PHONE (636) 581-3737 EXT. 120

ELECTRIC

OWNER QUIVRE RIVER ELECTRIC COOPERATIVE, INC.
 REPRESENTATIVE
 ADDRESS P.O. BOX 160
 TROY, MO 63379
 PHONE (636) 327-5282

GAS

OWNER ST. CHARLES GAS COMPANY
 REPRESENTATIVE MIKE LANGAN
 ADDRESS 1 WESTBURY SQUARE, BLDG. D
 ST. CHARLES, MO. 63301
 PHONE

TELEPHONE

OWNER VERIZON MIDWEST
 REPRESENTATIVE CARL OWENS
 ADDRESS 680 PARR RD. BLDG. AA
 WENTZVILLE, MO.
 PHONE (636) 332-7392

CABLE

OWNER CHARTER COMMUNICATIONS
 REPRESENTATIVE RANDY HENDE
 ADDRESS 4282 SHORELINE DRIVE
 BARTH CITY, MO. 63045
 PHONE (314) 738-0091

CITY OF LAKE SAINT LOUIS

DIRECTOR OF COMMUNITY DEVELOPMENT STEVE SCHERTEL
 ADDRESS 1000 LAKE SAINT LOUIS BOULEVARD, SUITE 16
 LAKE SAINT LOUIS, MISSOURI 63367
 CITY ADMINISTRATOR PAUL MARKWORTH
 PHONE (636) 625-1200

STATE AND FEDERAL AGENCIES

MISSOURI DEPARTMENT OF TRANSPORTATION
 REPRESENTATIVE JIM GREMARD
 ADDRESS
 PHONE (636) 240-5277

SITE DEVELOPMENT PLANS FOR SHOPPES AT LAKE SAINT LOUIS AND



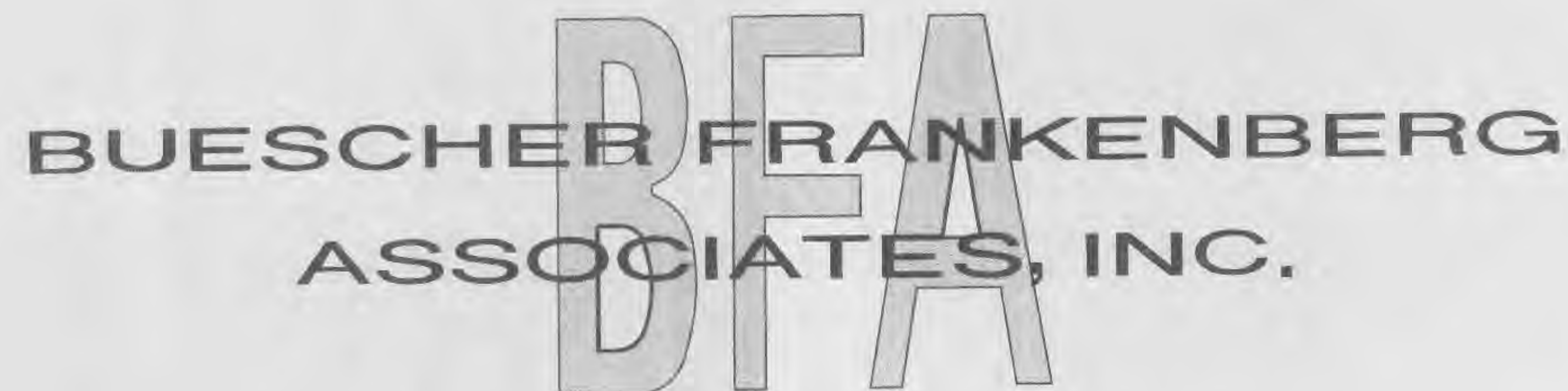
IN THE CITY OF LAKE SAINT LOUIS
 ST. CHARLES COUNTY, MISSOURI

OWNER/DEVELOPER
 SCHNUCK MARKETS, INC.

P.O. BOX 46928
 11420 LACKLAND ROAD, ST. LOUIS, MO. 63146-6928
 TELEPHONE (314) 994-9900

LAKE SAINT LOUIS, MISSOURI

B.F.A. PROJECT No. 98-2394



CONSULTANTS-ENGINEERS-SURVEYORS

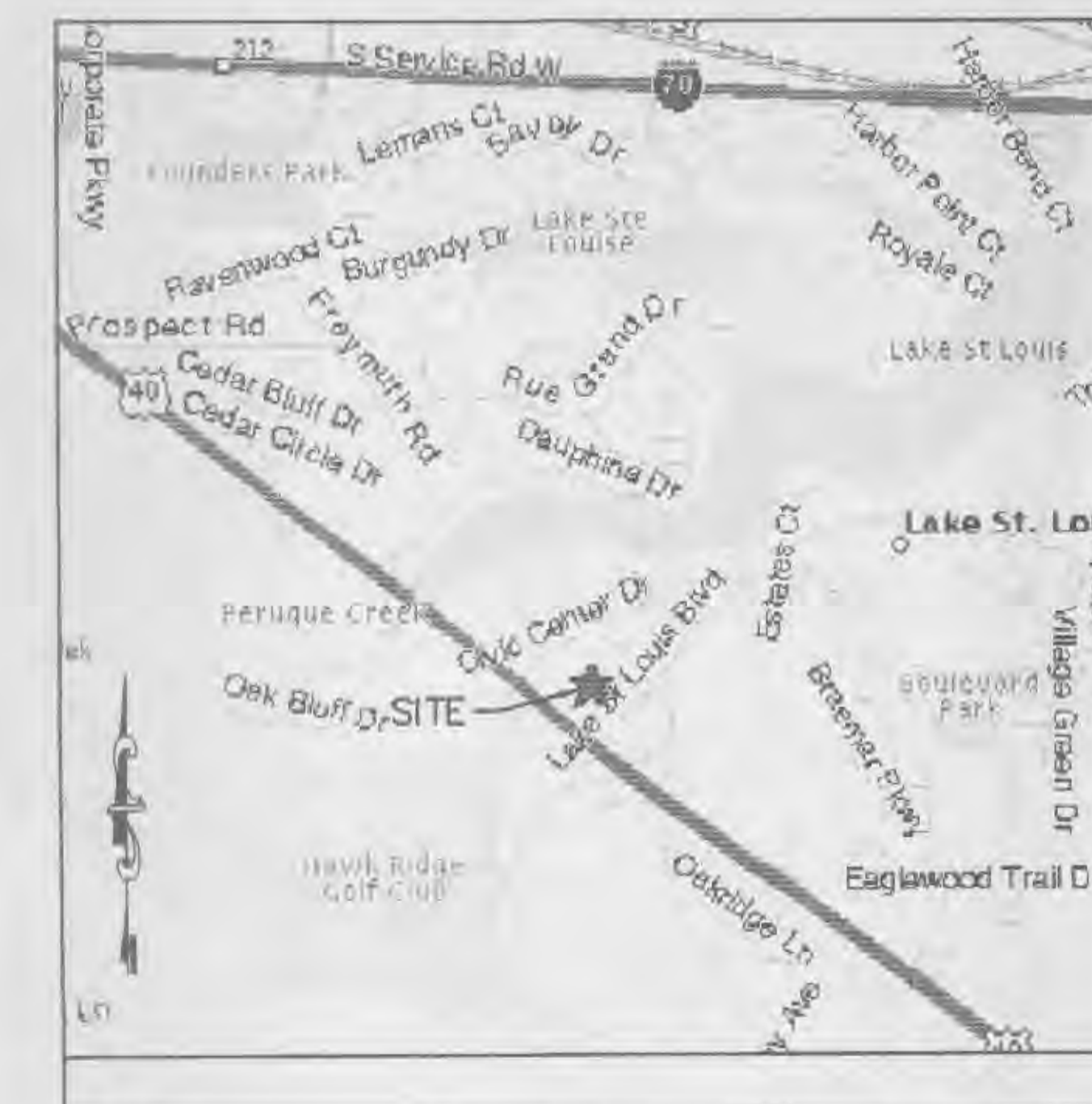
103A ELM STREET WASHINGTON, MISSOURI 63090
 TELEPHONE (636) 239-4751

JUNE, 2002

RECEIVED
 AUG 27 2002
 CITY OF OFALLON, MO

SITE DEVELOPMENT PLANS SHEET TITLE	SHEET NO.
TOPOGRAPHIC & OUTBOUNDARY SURVEY	1
DEMOLITION PLAN	2
SITE PLAN	3
EROSION CONTROL PLAN	4
GRADING AND DRAINAGE PLAN	5
SITE UTILITIES PLAN	6
* SITE LIGHTING PLAN	7
SANITARY SEWER PLAN AND PROFILE	8
SANITARY SEWER PLAN AND PROFILE	9
STORM SEWER PLAN AND PROFILE	10
STORM SEWER PLAN AND PROFILE	11
STORM SEWER PLAN AND PROFILE	12
DETAIL SHEET	13
DETAIL SHEET	14
DETAIL SHEET	15
DETAIL SHEET	16
PRECAST DROP INLET SHEET	17

* NOTE SHEET 7 HAS BEEN DESIGNED & PROVIDED BY OTHERS



Daniel E. Maschrodt, P.E. #17206
 Registered Professional Engineer
 State of Missouri
 for Buescher Frankenberg Associates Inc.

PRELIMINARY DRAWING
 AUG 26 2002
 FOR REVIEW PURPOSES ONLY
 NOT TO BE USED FOR CONSTRUCTION

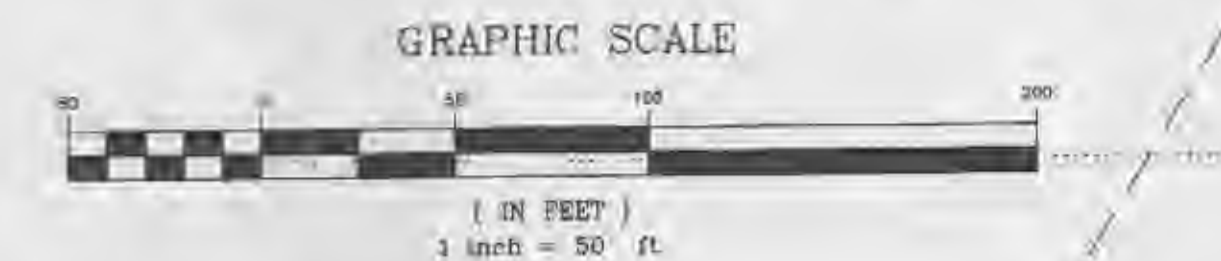
Two working days prior to the start of any excavation on this site, contractor shall call 1-800-DIG-RTE for utility location information.
 All OSHA rules & regulations established for the type of construction required by these plans shall be strictly followed (ie. Trenching, Blasting, etc.)

TOPOGRAPHIC & OUTBOUNDARY SURVEY

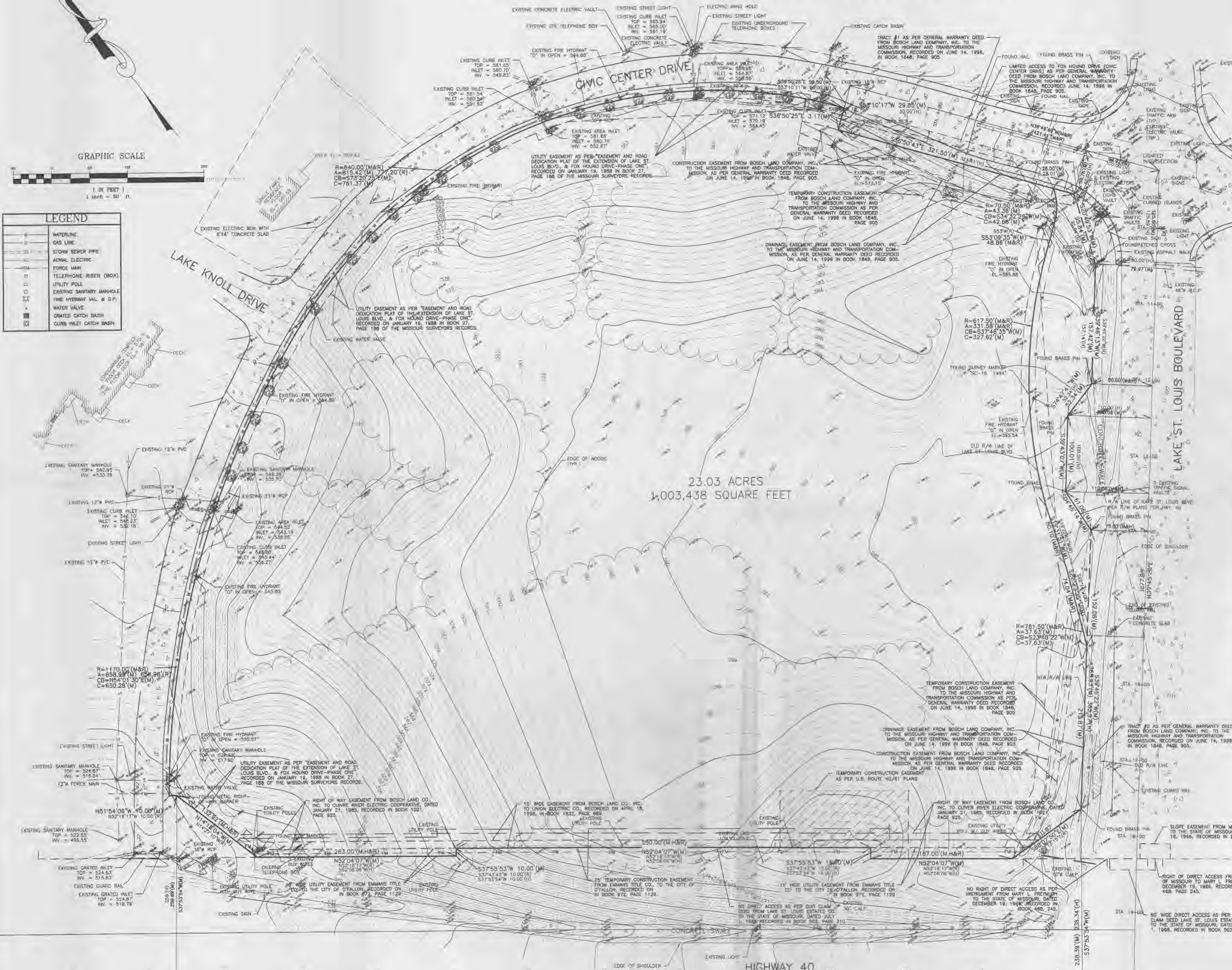
PART OF U.S. SURVEYS 825 & 1782, & PART OF SECTIONS 33 & 34

TOWNSHIP 47 NORTH, RANGE 2 EAST OF THE 5th P.M.

CITY OF LAKE ST. LOUIS, ST. CHARLES COUNTY, MISSOURI



LEGEND	
	WATERLINE
	GAS LINE
	STORM SEWER PIPE
	AERIAL ELECTRIC
	FORCE MAIN
	TELEPHONE RISER (BOX)
	UTILITY POLE
	EXISTING SANITARY MANHOLE
	FIRE HYDRANT W/ & D.P.
	WATER VALVE
	DRAINED CATCH BASIN
	CURB INLET CATCH BASIN



23.03 ACRES
1,003,438 SQUARE FEET

- NOTES:**
- North derived from bearing of record for the centerline of Relocated Lake St. Louis Boulevard as per Highway Plans for Lake St. Louis Boulevard, Job No. J6P0572B, Sheet 9. (S39°45'-20"W)
 - Underground structures, facilities, and utilities have been plotted from existing surveys and records. Therefore their locations must be considered approximate only, there may be others, the existence of which is presently not known.
 - R = Recorded Outboundary information as per Easement and Road Dedication Plat of Extension of Lake St. Louis Blvd. & Fox Hound Drive - Phase One, recorded January 19, 1988 in Book 27, Page 188 of the Missouri Surveyors Records.
 - H = Recorded Outboundary information as per Highway Plans for Lake St. Louis Boulevard, Job No. J6P072B, Sheets 3, 4 and 9.
 - M = Measured Outboundary information obtained in June, 1998 by M.R.F. and M.S.M.
 - Benchmark information as per Grading Plan for Old Lake St. Louis Boulevard by Staley & Ferrarbach, Inc., dated November, 1984, Job No. 8306. U.S.G.S Datum, Square on top of wing wall - N.E. corner of Bridge - East bound lane of Highway 40-61 over Paragou Creek, Elevation = 513.14
 - This site is "Zone X" Areas determined to be outside 500-year flood plain, as per FIRM Flood Insurance Rate Map for St. Charles County, Missouri and Incorporated Areas, Panel 220 of 525, Map No. 28163C0220 E, Map Revised August 2, 1996.

EASEMENT NOTES: As per Commitment for Title Insurance issued by Commonwealth Land Title Insurance Company, Abstract No. 294532, Effective date June 9, 1998, Schedule B Section II:

Item #4: Subject to limited access to Highway 40-61 according to instrument recorded in Book 48B, Page 245 and Book 502 Page 310.

Item #5: Subject to an easement disclosed by and instrument recorded in Book 252, Page 429, Book 252, Page 431. (Blanket easement therefore cannot be shown, appears to lie within 1 foot of Old Highway 40-61 right-of-way line).

Item #9: Subject to limited access to Routes 40-61, Lake St. Louis Boulevard and Fox Hound Drive (Civic Center Drive) as set forth in Deed recorded in Book 1848, Page 905.

DESCRIPTION:

A tract of land being part of U.S. Surveys 825 and 1782, and part of fractional sections 33 and 34, Township 47 North, Range 2 East of the 5th P.M., City of Lake St. Louis, St. Charles County, Missouri, to wit:

Beginning at a found metal right-of-way marker in the northeast right-of-way line of U.S. Highway 40-61; thence along said right-of-way line N51°54'-06"W 10.00 ft. to a set iron rod at the southwest corner of Civic Center Drive; thence leaving said northeast right-of-way line along the south right-of-way line of said Civic Center Drive along a curve deflecting to the right having a radius of 1170.00 ft., an arc length of 888.55 ft., a chord bearing of N54°01'-30"E, a chord distance of 650.28 ft. to a set iron rod, thence along a curve deflecting to the right having a radius of 640.00 ft., an arc length of 815.42 ft., a chord bearing of S73°20'-25"E, a chord distance of 761.37 ft. to a set iron rod, thence S35°50'-25"E 3.17 ft. to a set iron rod, thence S32°40'-17"W 29.85 ft. to a set iron rod, thence S32°50'-43"E 321.92 ft. to a point at the intersection of said right-of-way line and the northwest right-of-way line of Lake St. Louis Boulevard; thence along said northeast right-of-way line S20°49'-53"W 95.84 ft. to a point, thence S39°46'-13"W 157.42 ft. to a point, thence S74°14'-41"W 52.34 ft. to a point, thence S39°43'-07"W 100.01 ft. to a point, thence S24°49'-14"W 61.08 ft. to a point, thence S39°48'-22"W 151.96 ft. to a found brass pin at the intersection of said northeast right-of-way line and the northeast right-of-way line of relocated Lake St. Louis Boulevard; thence along the northeast right-of-way line of said relocated Lake St. Louis Boulevard S39°48'-22"W 213.87 ft. to a found brass pin at the intersection of said relocated Lake St. Louis Boulevard and the said northeast right-of-way line of U.S. Highway 40-61; thence along said right-of-way line S88°07'-50"E 111.87 ft. to a set iron rod, thence N52°04'-07"W 187.00 ft. to a set iron rod, thence S37°55'-53"W 15.00 ft. to a set iron rod, thence N52°04'-07"W 550.00 ft. to a set iron rod, thence S37°55'-53"W 10.00 ft. to a set iron rod, thence N52°04'-07"W 283.00 ft. to a set iron rod, thence N14°15'-04"W 132.92 ft. to the point of beginning, containing 23.03 acres. Subject to any and all easements, restrictions, conditions, etc. of record.

STATE OF MISSOURI
COUNTY OF ST. CHARLES

This is to certify, to Schnucks Markets, Inc. and Commonwealth Land Title Insurance Company that we have, during the month of June, 1998, executed a survey of a tract of land being part of U.S. Surveys No. 825 and 1782, and part of Fractional Sections 33 and 34, Township 47 North, Range 2 East of the 5th P.M., City of Lake St. Louis, St. Charles County, Missouri; to the best of my knowledge and belief this plan and the survey on which it is based was made in accordance with the Minimum Standards for Property Boundary Surveys of the State of Missouri and the Minimum Standard Detail Requirements for ALTA/ACSM Land Title Surveys, jointly established and adopted by ALTA and ACSM in 1997 and meets the accuracy requirements of a "Urban Survey" as defined therein.

Date
Mark R. Frankenberg, L.S. #2365
State of Missouri
Registered Land Surveyor
for Buescher-Frankenberg Associates, Inc.

PRELIMINARY DRAWING

AUG 26 2002
FOR REVIEW PURPOSES ONLY
NOT TO BE USED FOR CONSTRUCTION

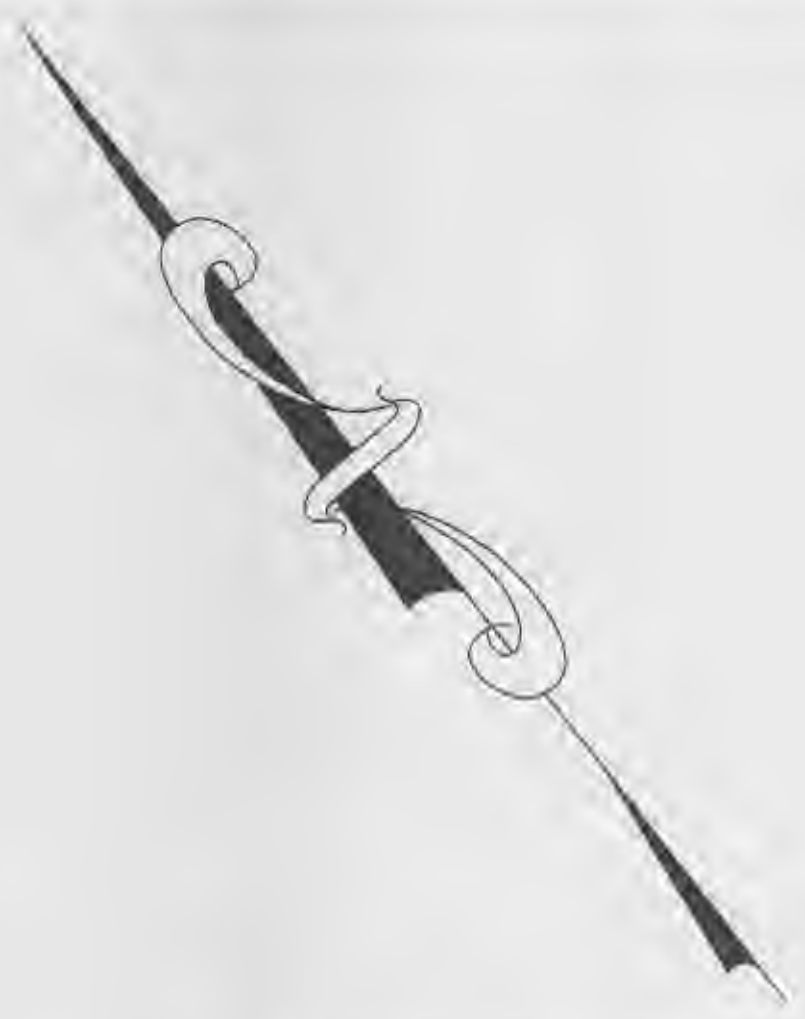
TOPOGRAPHIC & OUTBOUNDARY SURVEY
PART OF U.S. SURVEYS 825 & 1782, & PART OF FRACTIONAL SECTIONS 33 & 34
TOWNSHIP 47 NORTH, RANGE 2 EAST OF THE 5th P.M.
CITY OF LAKE ST. LOUIS, ST. CHARLES COUNTY, MISSOURI

E-mail: mfrank@bfa.net TELEPHONE: (636) 239-4751
BUESCHER-FRANKENBERG ASSOCIATES, INC.
1026 ELM STREET WASHINGTON, MISSOURI 63093

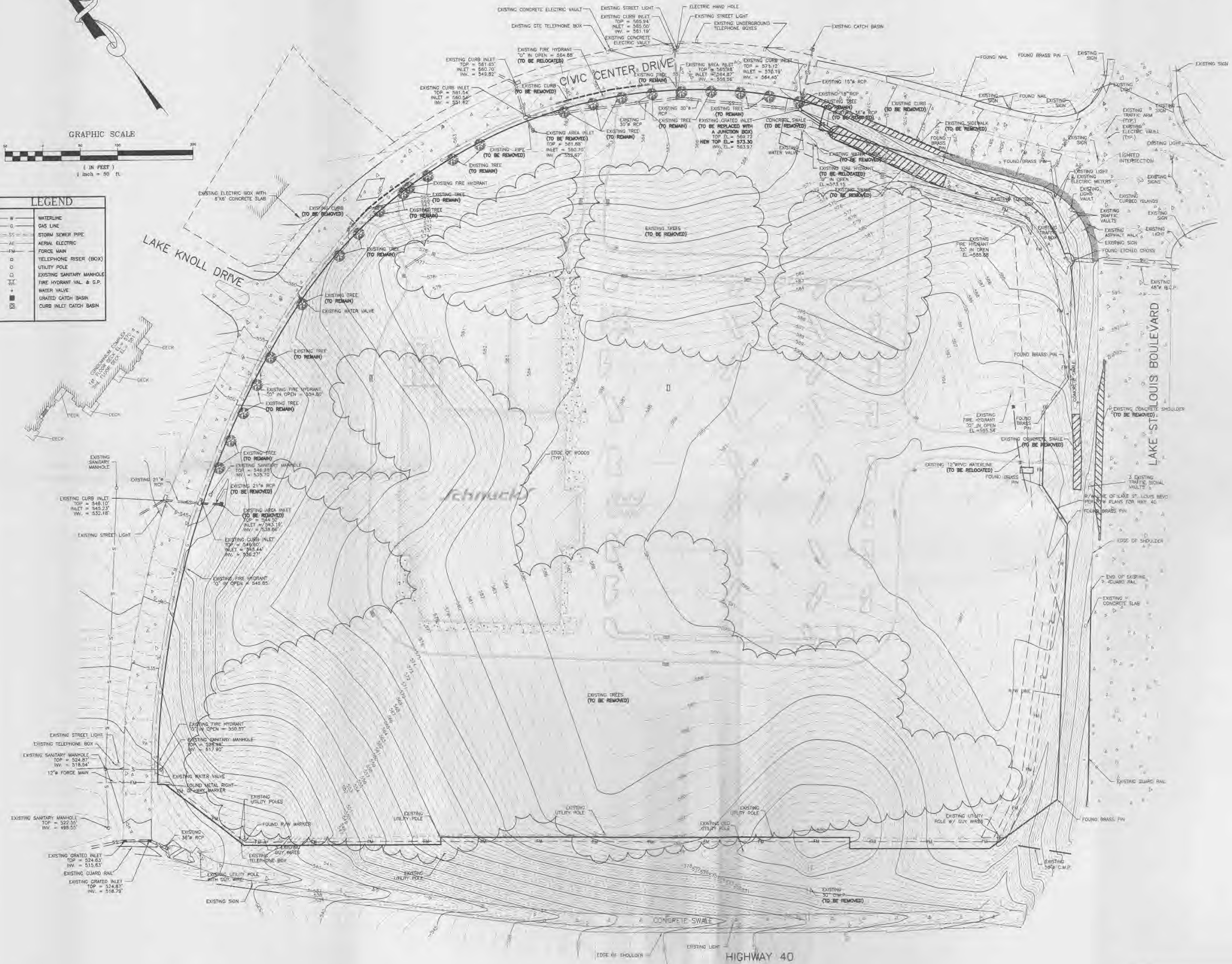
DATE	BY	REVISION
JULY 13, 1998	M.R.F.	98-2364

ADDED STATIONING BY DATE APPLIED
1" = 50'
1 OF 17

DEMOLITION PLAN SHOPPES AT LAKE ST. LOUIS



LEGEND	
— W	WATERLINE
— G	GAS LINE
— SS	STORM SEWER PIPE
— AE	AERIAL ELECTRIC
— FM	FORCE MAIN
□	TELEPHONE RISER (BOX)
○	UTILITY POLE
○	EXISTING SANITARY MANHOLE
○	FIRE HYDRANT VAL. & G.P.
○	WATER VALVE
○	GRADED CATCH BASIN
○	CURB INLET CATCH BASIN



- NOTES:**
- The Contractor is specifically cautioned that the location and/or elevation of existing utilities as shown on these plans is based on records of the various utility companies and, where possible, measurements taken in the field. The information is not to be relied on as being exact or complete. The Contractor must call the appropriate utility company to request exact field location of utilities. It shall be the responsibility of the Contractor to relocate all existing utilities which conflict with the proposed improvements shown on plans.
 - Benchmark information as per Grading Plan for Old Lake St. Louis Boulevard by Stovick & Farnsworth, Inc. dated November, 1984, Job No. 8303, U.S.G.S. Datum, Squares on top of wing wall - N.E. corner of Bridge - East bound lane of Highway 40-81 over Paragut Creek, Elevation = 513.14
 - North derived from bearing of record for the centerline of Relocated Lake St. Louis Boulevard, Job No. JBP08728, Sheet 7, (53P-45-207W)
 - Field data obtained June 1998 by M.R.F. and M.S.M.
 - Property Zoned "CB" Community Business District, as per City Engineer. Setback Requirements:
50 Feet - Minimum right-of-way setback
45 Feet - Rear yards setback
10 Feet - Side yard setback
 - This site is "Zone X" Areas determined to be outside 500-year flood plain, as per FIRM Flood Insurance Rate Map for St. Charles County, Missouri and Incorporated Areas, Panel 220 of 525, Map No. 2918300220 E, Map Revised August 2, 1998.
 - Contractor shall notify all utility companies having underground utilities on site or in right-of-way prior to excavation. Contractor shall contact utility locating company and locate all utilities prior to grading start.
 - Site grading shall not proceed until erosion control measures have been installed.
 - The contractor is responsible for keeping storm water run-off and siltation under control during construction.
 - Land disturbing activities shall not commence until approval to do so has been received by governing authorities.
 - All existing structures, unless otherwise noted to remain, fencing, trees, and etc. within the construction area shall be removed and disposed of off site. Any burning on site shall be subject to local and state Specifications.
 - All demolition, asbestos, etc. fees are to be paid by the contractor.
 - Contractor is responsible for all underground utilities that are required to be removed and relocated.
 - Contractor shall refer to the grading plan for additional classification of trees which are to remain. Trees that are to be saved shall be protected by placing construction fencing at the drip line of the trees. Construction fencing shall be posted prior to doing any excavation.
 - It shall be the Contractors responsibility to keep mud and silt on-site and off the streets. Contractor shall establish a construction access wash down area at site construction access location. All temporary sediment preventors, meters, valves, etc. required shall be provided by the contractor.
 - Contractor shall coordinate the relocation of signs, light poles, etc. that are within the highway improvements work area with the Missouri Department of Transportation and the City of Lake St. Louis.
 - Contractor shall be responsible for traffic control, necessary barricades, construction fence, temporary signage, etc. necessary to facilitate customer and truck traffic and insure customer safety.
 - All utilities providing service to the adjacent property owners shall be relocated, removed, and/or rehabilitated and hooked-up in a manner to not cause disruption of service. Contractor is responsible for all temporary utilities, sanitary sewer, storm sewer structures, etc. necessary to maintain service throughout each phase of construction.
 - Contractor shall avoid existing pavement, concrete, curb and gutter at limits of removal. Contractor shall provide a smooth transition from existing surfaces to proposed improvements.



Daniel E. Maschmann, P.E. #17208
Registered Professional Engineer
State of Missouri
for Buescher Franks Associates, Inc.

PRELIMINARY DRAWING

AUG 26 2002

FOR REVIEW PURPOSES ONLY
NOT TO BE USED FOR CONSTRUCTION

**DEMOLITION PLAN
SHOPPES AT LAKE ST. LOUIS**
FOR SCHNUCK MARKETS INC.
LAKE ST. LOUIS, ST. CHARLES CO., MISSOURI
E-mail: efranke@bfa.com TELEPHONE: (636) 239-4751
**BUESCHER FRANKENBERG
ASSOCIATES, INC.**

1330 ELM STREET WASHINGTON, MISSOURI 63080

NO.	DATE	BY	REVISION

DATE: D.A.R., P.K.S. MAY, 2002
SCALE: 1" = 50'
SHEET NO.: 98-2384
TOTAL SHEETS: 2 OF 17

SITE PLAN SHOPPES AT LAKE ST. LOUIS

SCHNUCK'S SITE DATA	
Address:	22.09 AC.
Lot 1 thru 4	
Schnucks Building	63,254 SF
Retail Building	12,600 SF
Green Area	172,438 SF
Drive Lane Area	25,180 SF
Loading Area	44,023 SF
Storage Area	10,941 SF
Parking Area	163,705 SF
Total (Lot 1) Building Area	547,139 SF
Parking Requirements	
Local Parking Required	316
Retail Food Store = 63,254/200 =	76
Retail = 12,600/165 =	52
Total Parking Required (LOT 1)	352
Parking Provided:	
Standard	466
Cart Control	12
Handicapped	13
Total Parking Provided	491
See # 2 (see page 10) of plan	

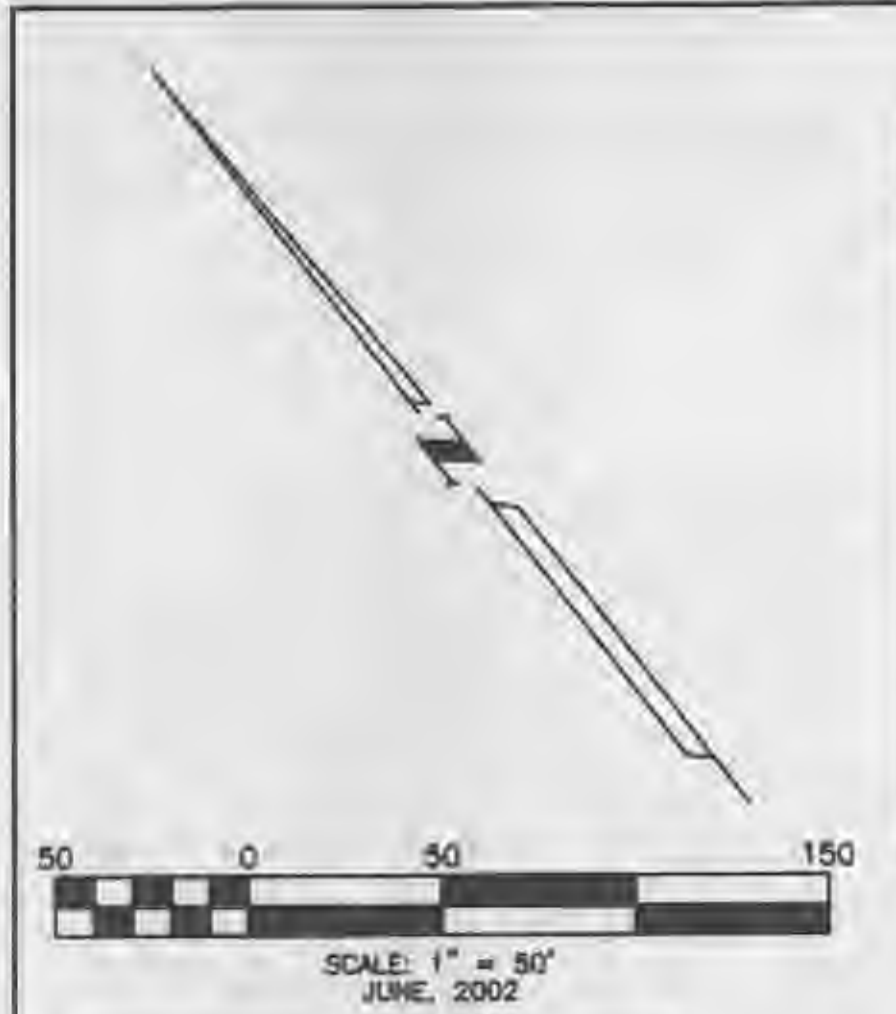
NOTE:
Property is Zoned "CB" Community Business District, as per City Engineer.
Setback Requirements:
50 Feet - Minimum right-of-way setback
40 Feet - Rear yard setbacks
10 Feet - Side yard setbacks
Parking Requirements as per "Lake Saint Louis Missouri" - Development and Zoning Regulations
Retail Store - 1 per 160 sq.ft. of Gross Leasable Floor Area
Retail Food Store - 1 per 300 sq.ft. of Gross Leasable Floor Area

NEW IMPROVEMENTS	
○	NEW FIRE HYDRANT
○	NEW GATE VALVE
○	NEW WATERLINE
○	NEW DOUBLE CATCH BASIN
○	NEW CATCH BASIN
○	NEW JUNCTION BOX
○	NEW STORM SEWER PIPE
○	NEW SANITARY MANHOLE
○	NEW SANITARY SEWER PIPE
○	NEW GASLINE
○	NEW FRENCH DRAIN
○	NEW LIGHT
○	NEW SPOT DRADE
○	NEW CONTOURS
○	NEW CONTOURS

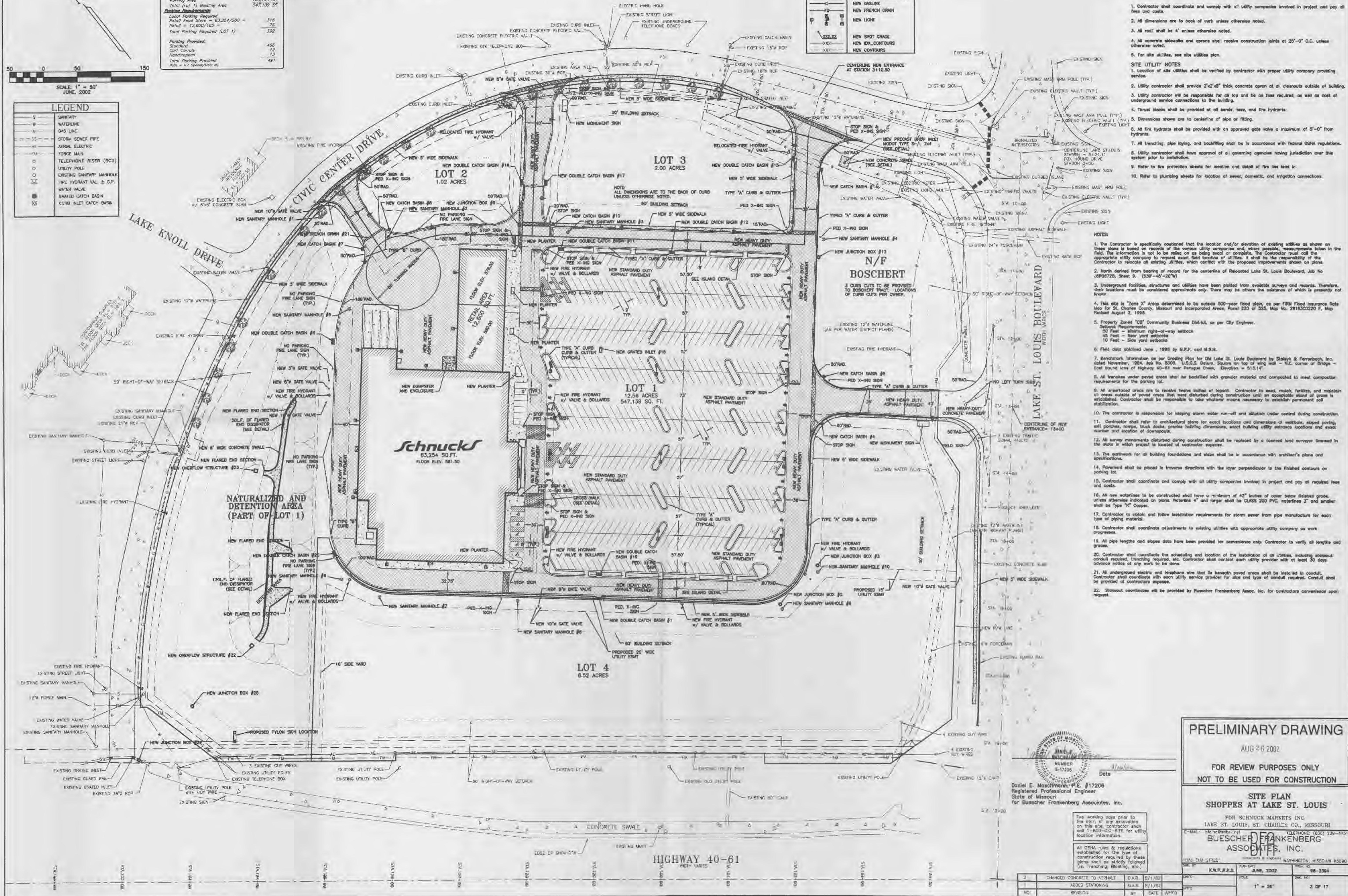
- SITE NOTES:**
- Contractor shall coordinate and comply with all utility companies involved in project and pay all fees and costs.
 - All dimensions are to back of curb unless otherwise noted.
 - All road shall be 4' unless otherwise noted.
 - All concrete sidewalks and aprons shall receive construction joints at 20'-0" O.C. unless otherwise noted.
 - For site utilities, see site utilities plan.

- SITE UTILITY NOTES**
- Location of site utilities shall be verified by contractor with proper utility company providing service.
 - Utility contractor shall provide 2"x2"x8" thick concrete apron at all cleanouts outside of building.
 - Utility contractor shall be responsible for all top and tie in fees required, as well as cost of underground service connections to the building.
 - Thrust blocks shall be provided at all bends, tees, and fire hydrants.
 - Dimensions shown are to centerline of pipe or fitting.
 - All fire hydrants shall be provided with an approved gate valve a maximum of 5'-0" from hydrants.
 - All trenching, pipe laying, and backfilling shall be in accordance with federal OSHA regulations.
 - Utility contractor shall have approval of all governing agencies having jurisdiction over this system prior to installation.
 - Refer to fire protection sheets for location and detail of fire line lead in.
 - Refer to plumbing sheets for location of sewer, domestic, and irrigation connections.

- NOTES:**
- The Contractor is specifically cautioned that the location and/or elevation of existing utilities as shown on these plans is based on records of the various utility companies and, where possible, measurements taken in the field. The information is not to be relied on as being exact or complete. The Contractor must call the appropriate utility company to request exact field location of utilities. It shall be the responsibility of the Contractor to relocate all existing utilities, which conflict with the proposed improvements shown on plans.
 - North derived from bearing of record for the centerline of Reconstructed Lake St. Louis Boulevard, Job No. J060726, Sheet 9. (53°-45'-20"W)
 - Underground facilities, structures and utilities have been plotted from available surveys and records. Therefore, their locations must be considered approximate only. There may be other utilities which are presently not known.
 - This site is "Zone X" Aris determined to be outside 500-year flood plain, as per FIRM Flood Insurance Rate Map for St. Charles County, Missouri and Incorporated Areas, Panel 220 of 555, Map No. 28183C0220 E, Map Revised August 2, 1998.
 - Property Zoned "CB" Community Business District, as per City Engineer.
Setback Requirements:
50 Feet - Minimum right-of-way setback
40 Feet - Rear yard setbacks
10 Feet - Side yard setbacks
 - Field data obtained June 1, 1998 by M.J.F. and M.S.M.
 - Benchmark information as per Grading Plan for Old Lake St. Louis Boulevard by Staley & Frenschbach, Inc. dated November, 1984, Job No. 8306. U.S.G.S. Datum. Square on top of wing wall - N.E. corner of Bridge - East bound lane of Highway 40-61 over Perryville Creek. Elevation = 513.14'
 - All trenches under paved areas shall be backfilled with granular material and compacted to meet compaction requirements for the parking lot.
 - All unimproved areas are to receive heavy traffic of footfall. Contractor to seed, mow, fertilize, and maintain all areas outside of paved areas that were disturbed during construction until an acceptable stand of grass is established. Contractor shall be responsible to take whatever means necessary to establish permanent soil stabilization.
 - The contractor is responsible for keeping storm water run-off and siltation under control during construction.
 - Contractor shall refer to architectural plans for exact locations and dimensions of walkways, stepped paving, and parking ramps, truck docks, grade building dimensions, exact building utility entrance locations and exact number and location of doorways.
 - All survey measurements disturbed during construction shall be replaced by a licensed land surveyor licensed in the state in which project is located at contractor's expense.
 - The earthwork for all building foundations and slabs shall be in accordance with architect's plans and specifications.
 - Payment shall be placed in traverse directions with the layer perpendicular to the finished contours on parking lot.
 - Contractor shall coordinate and comply with all utility companies involved in project and pay all required fees and costs.
 - All new waterlines to be constructed shall have a minimum of 42" inches of cover below finished grade, unless otherwise indicated on plans. Waterline 4" and larger shall be CLASS 200 PVC, waterline 3" and smaller shall be Type "K" Copper.
 - Contractor to obtain and follow installation requirements for storm sewer from pipe manufacturer for each type of piping material.
 - Contractor shall coordinate adjustments to existing utilities with appropriate utility company as work progresses.
 - All pipe lengths and slope data have been provided for convenience only. Contractor to verify all lengths and grades.
 - Contractor shall coordinate the scheduling and location of the installation of all utilities, including electrical, gas, and telephone, with the contractor. Contractor shall contact each utility provider with at least 30 days advance notice of any work to be done.
 - All underground electric and telephone wires that be beneath paved areas shall be installed in conduit. Contractor shall coordinate with each utility service provider for size and type of conduit required. Conduit shall be provided at contractor's expense.
 - Showcut coordinates will be provided by Buschert Frankenberg Assoc. Inc. for contractor's convenience upon request.



LEGEND	
○	SANITARY
○	WATERLINE
○	GAS LINE
○	STORM SEWER PIPE
○	AERIAL ELECTRIC
○	FORCE MAIN
○	TELEPHONE RISER (BOX)
○	UTILITY POLE
○	EXISTING SANITARY MANHOLE
○	FIRE HYDRANT VAL. & G.P.
○	WATER VALVE
○	GRADED CATCH BASIN
○	CURB INLET CATCH BASIN



PRELIMINARY DRAWING
AUG 26 2002

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**SITE PLAN
SHOPPES AT LAKE ST. LOUIS**

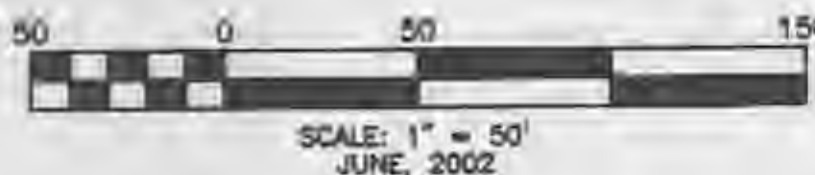
FOR SCHNUCK MARKETS INC.
LAKE ST. LOUIS, ST. CHARLES CO., MISSOURI
E-MAIL: sfo@schuck.com TELEPHONE: (636) 239-4751
**BUESCHERT FRANKENBERG
ASSOCIATES, INC.**
WASHINGTON, MISSOURI 63080

DATE	BY	REVISION
JUNE, 2002	K.W.F./J.K.S.	1
JUNE, 2002	J.A.R.	2
JUNE, 2002	J.A.R.	3
JUNE, 2002	J.A.R.	4
JUNE, 2002	J.A.R.	5
JUNE, 2002	J.A.R.	6
JUNE, 2002	J.A.R.	7
JUNE, 2002	J.A.R.	8
JUNE, 2002	J.A.R.	9
JUNE, 2002	J.A.R.	10
JUNE, 2002	J.A.R.	11
JUNE, 2002	J.A.R.	12
JUNE, 2002	J.A.R.	13
JUNE, 2002	J.A.R.	14
JUNE, 2002	J.A.R.	15
JUNE, 2002	J.A.R.	16
JUNE, 2002	J.A.R.	17
JUNE, 2002	J.A.R.	18
JUNE, 2002	J.A.R.	19
JUNE, 2002	J.A.R.	20
JUNE, 2002	J.A.R.	21
JUNE, 2002	J.A.R.	22

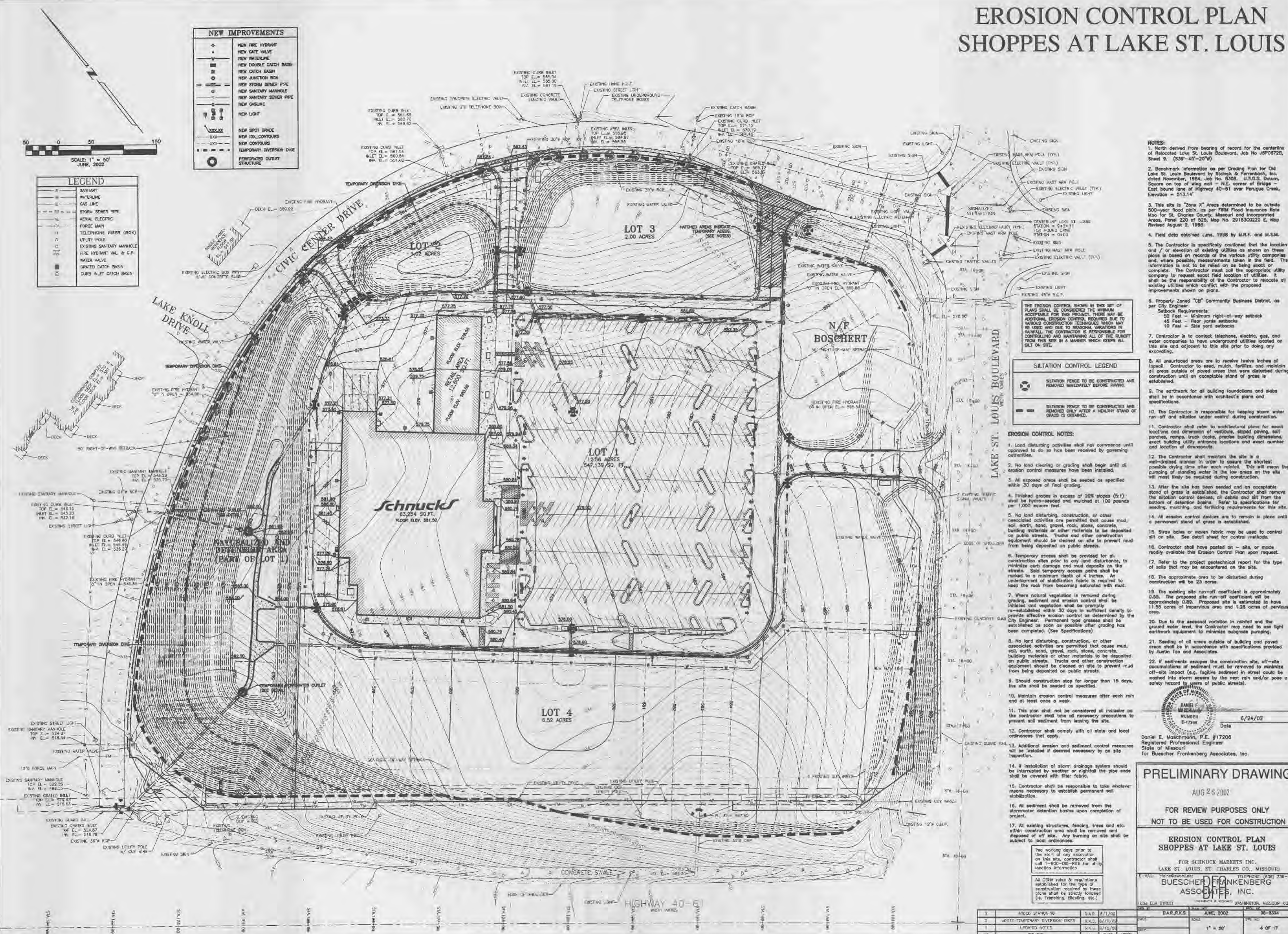
DATE: JUNE, 2002
SCALE: 1" = 30'
SHEET: 3 OF 17

EROSION CONTROL PLAN SHOPPES AT LAKE ST. LOUIS

NEW IMPROVEMENTS	
◆	NEW FIRE HYDRANT
▲	NEW GATE VALVE
■	NEW WATERLINE
▣	NEW DOUBLE CATCH BASIN
□	NEW CATCH BASIN
○	NEW JUNCTION BOX
⊖	NEW STORM SEWER PIPE
⊕	NEW SANITARY MANHOLE
⊗	NEW SANITARY SEWER PIPE
⊘	NEW GASLINE
○	NEW LIGHT
—	NEW SPOT GRADE
---	NEW IDAL CONTOURS
---	NEW CONTOURS
---	TEMPORARY DIVERSION DIKE
---	PERFORATED OUTLET STRUCTURE



LEGEND	
—	SANITARY
—	WATERLINE
—	GAS LINE
—	STORM SEWER PIPE
—	AERIAL ELECTRIC
—	FORCE MAIN
—	TELEPHONE RISER (BOX)
—	UTILITY POLE
—	EXISTING SANITARY MANHOLE
—	FIRE HYDRANT VAL. & G.P.
—	WATER VALVE
—	GRADED CATCH BASIN
—	CURB INLET CATCH BASIN



THE EROSION CONTROL SHOWN IN THIS SET OF PLANS SHALL BE CONSIDERED THE MINIMUM ACCEPTABLE FOR THIS PROJECT. THERE MAY BE ADDITIONAL EROSION CONTROL REQUIRED DUE TO VARIOUS CONSTRUCTION TECHNIQUES WHICH MAY BE USED AND DUE TO SEASONAL VARIATIONS IN WEATHER. THE CONTRACTOR IS RESPONSIBLE FOR CONTROLLING AND MAINTAINING ALL OF THE RUNOFF FROM THIS SITE IN A MANNER WHICH KEEPS ALL SILT ON SITE.

SILTATION CONTROL LEGEND	
—	SILTATION FENCE TO BE CONSTRUCTED AND REMOVED IMMEDIATELY BEFORE PAVING.
—	SILTATION FENCE TO BE CONSTRUCTED AND REMOVED ONLY AFTER A HEALTHY STAND OF GRASS IS OBTAINED.

EROSION CONTROL NOTES:

1. Land disturbing activities shall not commence until approved to do so has been received by governing authorities.
2. No land clearing or grading shall begin until all erosion control measures have been installed.
3. All exposed areas shall be seeded as specified within 30 days of final grading.
4. Finished grades in excess of 20% slopes (5:1) shall be hydro-seeded and mulched at 100 pounds per 1,000 square feet.
5. No land disturbing, construction, or other associated activities are permitted that cause mud, soil, silt, sand, gravel, rock, stone, concrete, building materials or other materials to be deposited on public streets. Trucks and other construction equipment should be cleaned on site to prevent mud from being deposited on public streets.
6. Temporary access shall be provided for all construction areas prior to any land disturbance, to minimize curb damage and mud deposits on the streets. Said temporary access paths shall be marked to a minimum depth of 4 inches. An underlayment of stabilization fabric is required to keep the rock from becoming saturated with mud.
7. Where natural vegetation is removed during grading, sediment and erosion control shall be installed and vegetation shall be promptly re-established within 30 days in sufficient density to provide effective erosion control as determined by the Engineer. Permanent type grasses shall be established as soon as possible after grading has been completed. (See Specifications)
8. No land disturbing, construction, or other associated activities are permitted that cause mud, soil, silt, sand, gravel, rock, stone, concrete, building materials or other materials to be deposited on public streets. Trucks and other construction equipment should be cleaned on site to prevent mud from being deposited on public streets.
9. Should construction stop for longer than 15 days, the site shall be seeded as specified.
10. Maintain erosion control measures after each rain and at least once a week.
11. This plan shall not be considered all inclusive as the contractor shall take all necessary precautions to prevent soil sediment from leaving the site.
12. Contractor shall comply with all state and local ordinances that apply.
13. Additional erosion and sediment control measures will be installed if deemed necessary by on site inspection.
14. If installation of storm drainage system should be interrupted by weather or nightfall the pipe ends shall be covered with filter fabric.
15. Contractor shall be responsible to take whatever means necessary to establish permanent soil stabilization.
16. All sediment shall be removed from the stormwater detention basins upon completion of project.
17. All existing structures, fencing, trees and etc. within construction area shall be removed and disposed of off site. Any burning on site shall be subject to local ordinances.

- NOTES:
1. North derived from bearing of record for the centerline of Relocated Lake St. Louis Boulevard, Job No. 98P0723, Sheet 9. (539-45-20'W)
 2. Benchmark information as per Grading Plan for Old Lake St. Louis Boulevard by Sialyk & Ferrenbach, Inc. dated November, 1984, Job No. 6308. U.S.G.S. Datum. Square on top of wing wall N.E. corner of Bridge - East bound lane of Highway 40-81 over Ferreque Creek, Elevation = 513.14'
 3. This site is "Zone X" Areas determined to be outside 500-year flood plain, as per FIRM Flood Insurance Rate Map for St. Charles County, Missouri and Incorporated Areas, Panel 220 of 525, Map No. 29183C0220 C, Map Revised August 2, 1996.
 4. Field data obtained June, 1998 by M.R.F. and M.S.M.
 5. The Contractor is specifically cautioned that the location and / or elevation of existing utilities as shown on these plans is based on records of the various utility companies and, where possible, measurements taken in the field. The information is not to be relied on as being exact or complete. The Contractor must call the appropriate utility company to request exact field location of utilities. It shall be the responsibility of the Contractor to relocate all existing utilities which conflict with the proposed improvements shown on plans.
 6. Property Zoned "CB" Community Business District, as per City Engineer.
Setback Requirements:
50 Feet - Minimum right-of-way setback
45 Feet - Rear yard setbacks
10 Feet - Side yard setbacks
 7. Contractor is to contact telephone, electric, gas, and water companies to have underground utilities located on this site and adjacent to this site prior to doing any excavating.
 8. All unexcavated areas are to receive twelve inches of topsoil. Contractor to seed, mulch, fertilize, and maintain all areas outside of paved areas that were disturbed during construction until on acceptable stand of grass is established.
 9. The earthwork for all building foundations and slabs shall be in accordance with architect's plans and specifications.
 10. The Contractor is responsible for keeping storm water run-off and siltation under control during construction.
 11. Contractor shall refer to architectural plans for exact locations and dimension of vestibules, sloped paving, soil patches, ramps, truck docks, precise building dimensions, exact building utility entrance locations and exact number and location of downspouts.
 12. The Contractor shall maintain the site in a well-drained manner in order to assure the shortest possible drying time after each rainfall. This will mean the pumping of standing water in the low areas on the site will most likely be required during construction.
 13. After the site has been seeded and an acceptable stand of grass is established, the Contractor shall remove the siltation control devices, all debris and silt from the bottom of detention basins. Refer to specifications for seeding, mulching, and fertilizing requirements for this site.
 14. All erosion control devices are to remain in place until a permanent stand of grass is established.
 15. Straw bales or woven fabric may be used to control silt on site. See detail sheet for control methods.
 16. Contractor shall have posted on - site, or made readily available the Erosion Control Plan upon request.
 17. Refer to the project geotechnical report for the type of soils that may be encountered on the site.
 18. The approximate area to be disturbed during construction will be 2.3 acres.
 19. The existing site run-off coefficient is approximately 0.55. The proposed site run-off coefficient will be approximately 0.89. Proposed site is estimated to have 11.55 acres of impervious area and 1.28 acres of pervious area.
 20. Due to the seasonal variation in rainfall and the ground water level, the Contractor may need to use light earthwork equipment to minimize subgrade pumping.
 21. Seeding of all areas outside of building and paved areas shall be in accordance with specifications provided by Austin Tool and Associates.
 22. If sediments escapes the construction site, off-site accumulations of sediment must be removed to minimize off-site impact (e.g. fugitive sediment in street could be washed into storm sewers by the next rain and/or pose a safety hazard to users of public streets).

Daniel E. Maschmann, P.E. #17200
Registered Professional Engineer
State of Missouri
for Buescher Frankenberg Associates, Inc.

PRELIMINARY DRAWING
AUG 26 2002
FOR REVIEW PURPOSES ONLY
NOT TO BE USED FOR CONSTRUCTION

**EROSION CONTROL PLAN
SHOPPES AT LAKE ST. LOUIS**
FOR SCHNUCK MARKETS INC.
LAKE ST. LOUIS, ST. CHARLES CO., MISSOURI

Daniel E. Maschmann, P.E. #17200
BUESCHER FRANKENBERG
ASSOCIATES, INC.
1032 ELM STREET, WASHINGTON, MISSOURI 63080

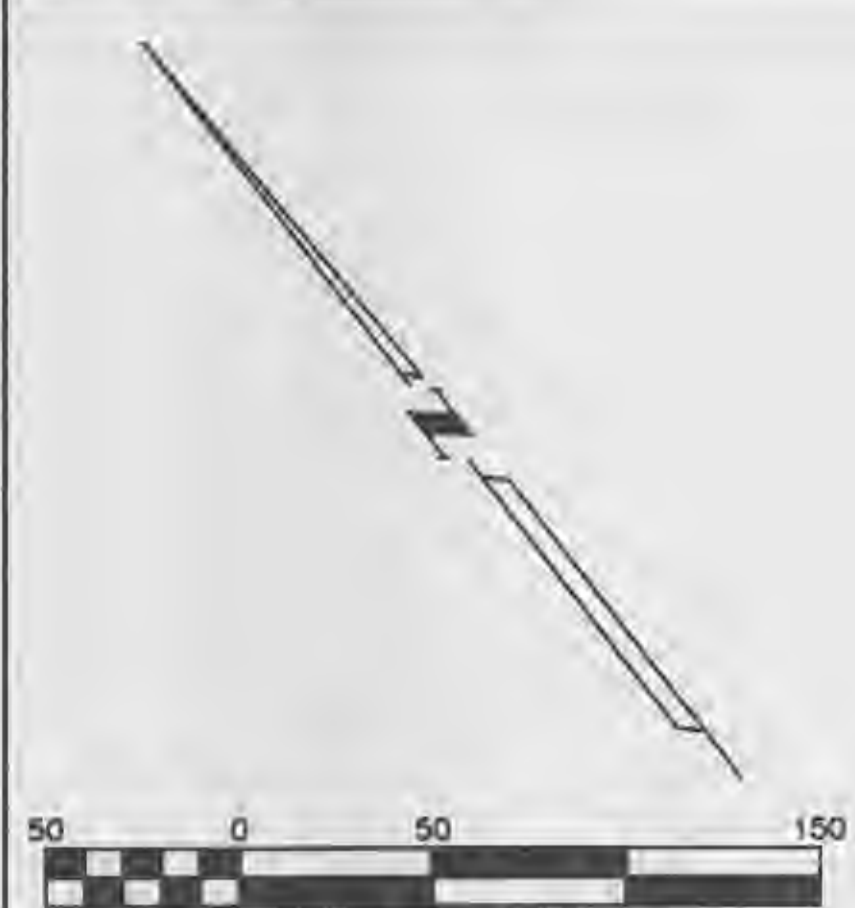
NO.	REVISION	BY	DATE	APPROVED
3	MOVED STATIONING	D.A.R.	8/1/02	
2	ADDED TEMPORARY DIVERSION DIKES	R.K.S.	6/15/02	
1	UPDATED NOTES	R.K.S.	6/16/02	

DATE: JUNE, 2002
SCALE: 1" = 50'
SHEET NO: 98-2584
4 OF 17

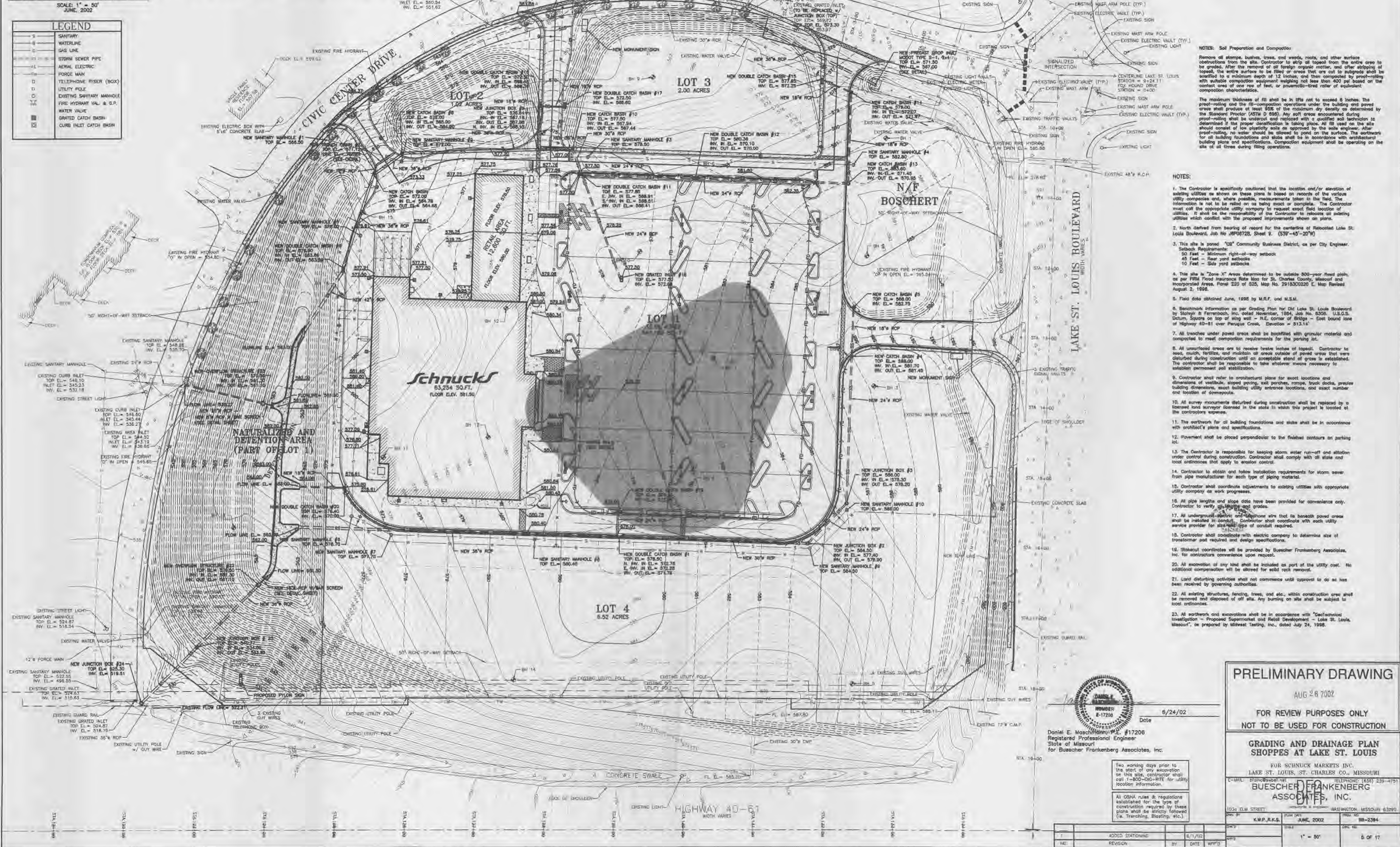
GRADING AND DRAINAGE PLAN SHOPPES AT LAKE ST. LOUIS

BORING DATA				
BORING NO.	SURFACE ELEV.	BORING DEPTH	DEPTH TO REFUSAL	REFUSAL ELEV.
1	585.54	10	NA	NA
2	584.33	7.5	7.5	586.83
3	597.76	13.5	13.5	584.26
4	597.76	7.5	7.5	586.83
5	583.38	6.5	6.5	578.85
6	580.33	12.5	12.5	587.83
7	582.48	5.5	5.5	586.95
8	581.55	8.5	8.5	583.05
9	566.55	30	NA	NA
10	587.12	10	NA	NA
11	578.22	13	NA	NA
12	584.22	12	12	572.22
13	584.87	8	8	578.97
14	580.89	15	NA	NA
15	575.01	15	NA	NA
16	584.68	18	NA	NA
17	578.72	13	13	585.72
18	581.89	15	NA	NA

NEW IMPROVEMENTS	
○	NEW FIRE HYDRANT
○	NEW GATE VALVE
○	NEW WATERLINE
○	NEW DOUBLE CATCH BASIN
○	NEW CATCH BASIN
○	NEW JUNCTION BOX
○	NEW STORM SEWER PIPE
○	NEW SANITARY MANHOLE
○	NEW SANITARY SEWER PIPE
○	NEW GASLINE
○	NEW FRENCH DRAIN
○	NEW LIGHT
○	NEW SPOT GRADE
○	NEW EX. CONTOURS
○	NEW CONTOURS



LEGEND	
○	SANITARY
○	WATERLINE
○	GAS LINE
○	STORM SEWER PIPE
○	AERIAL ELECTRIC
○	FORCE MAIN
○	TELEPHONE RISER (BOX)
○	UTILITY POLE
○	EXISTING SANITARY MANHOLE
○	FIRE HYDRANT VAL. & S.P.
○	WATER VALVE
○	GRADED CATCH BASIN
○	CURB INLET CATCH BASIN



NOTES: Soil Preparation and Composition:
 Remove all stumps, brush, trees, and weeds, roots, and other surface obstructions from the site. Contractor to strip all topsoil from the entire area to be graded. After the removal of all foreign organic matter, and after stripping of topsoil, the entire surface to be filled or graded that are cut to subgrade shall be scarified to a minimum depth of 12 inches, and then compacted by proof-rolling with suitable compaction equipment weighing not less than 4000 lbs based on the contact area of one row of feet, or pneumatic-tired roller of equivalent compaction characteristics.
 The maximum thickness of fill shall be in lifts not to exceed 8 inches. The spreading and the (fill) compaction operations under the building and paved areas shall produce at least 95% of the maximum dry density as determined by the Standard Proctor (ASTM D 698). Any soft areas encountered during proof-rolling shall be undercut and replaced with a qualified soil technician to determine if the proper densification is taking place. All fill placed on the site shall consist of low plasticity soils as approved by the soils engineer. After proof-rolling, no water should be allowed to pond on the surface. The earthwork for all building foundations and slabs shall be in accordance with architectural building plans and specifications. Compaction equipment shall be operating on the site at all times during filling operations.

- NOTES:**
- The Contractor is specifically cautioned that the location and/or elevation of existing utilities as shown on these plans is based on records of the various utility companies and, where possible, measurements taken in the field. The information is not to be relied on as being exact or complete. The Contractor must call the appropriate utility company to request exact location of utilities. It shall be the responsibility of the Contractor to relocate all existing utilities which conflict with the proposed improvements shown on plans.
 - North derived from bearing of record for the centerline of Relocated Lake St. Louis Boulevard, Job No. J080722, Sheet 9. (S39-45-20'N)
 - This site is zoned "C2" Community Business District, as per City Engineer. Subcode Requirements:
 50 Feet - Minimum right-of-way setback
 40 Feet - Rear yard setbacks
 10 Feet - Side yard setbacks
 - This site is in "Zone 3" Area determined to be outside 300-year flood plain, as per FEMA Flood Insurance Rate Map for St. Charles County, Missouri and Incorporated Areas, Panel 230 of 025, Map No. 2918300220 C, Map Revised August 2, 1998.
 - Flats data obtained June, 1998 by M.R.F. and M.S.A.
 - Benchmark information as per Grading Plan for Old Lake St. Louis Boulevard by Stuebe & Frankenberg, Inc. dated November, 1984, Job No. 8508. U.S.G.S. Datum. Square on top of wing wall = N.E. corner of bridge. East bound line of Highway 40-51 over Paragou Creek, Elevation = 513.14'
 - All trenches under paved areas shall be backfilled with granular material and compacted to meet compaction requirements for the parking lot.
 - All unroofed areas are to receive twelve inches of topsoil. Contractor to seed, mulch, fertilize, and maintain all areas outside of paved areas that were disturbed during construction until an acceptable state of grass is established. The contractor shall be responsible to take whatever means necessary to establish permanent soil stabilization.
 - Contractor shall refer to architectural plans for exact locations and dimensions of vestibule, storage rooms, and porches, ramps, brick docks, grease building dimensions, exact building utility entrance locations, and exact number and location of downspouts.
 - All survey monuments disturbed during construction shall be replaced by a licensed land surveyor licensed in the state in which this project is located at the contractor's expense.
 - The work for all building foundations and slabs shall be in accordance with architect's plans and specifications.
 - Placement shall be placed perpendicular to the finished contours on parking lot.
 - The Contractor is responsible for keeping storm water run-off and all other under control during construction. Contractor shall comply with all state and local ordinances that apply to erosion control.
 - Contractor to obtain and follow installation requirements for storm sewer from pipe manufacturer for each type of piping material.
 - Contractor shall coordinate adjustments to existing utilities with appropriate utility company as work progresses.
 - All pipe lengths and slope data have been provided for convenience only. Contractor to verify all utility and grades.
 - All underground electric and telephone wires that lie beneath paved areas shall be installed in conduit. Contractor shall coordinate with each utility service provider for acceptable type of conduit required.
 - Contractor shall coordinate with electric company to determine size of transformer and design specifications.
 - Subcontract coordinates will be provided by Buescher Frankenberg Associates, Inc. for contractor's convenience upon request.
 - All excavation of any kind shall be included as part of the utility cost. No additional compensation will be allowed for solid rock removal.
 - Land disturbing activities shall not commence until approved to do as has been received by governing authorities.
 - All existing structures, fencing, trees, and etc., within construction area shall be removed and disposed of off site. Any burning on site shall be subject to local ordinances.
 - All earthwork and excavations shall be in accordance with "Geotechnical Investigation - Proposed Supermarket and Retail Development - Lake St. Louis, Missouri", by Midwest Testing, Inc., dated July 24, 1998.



Daniel E. Moschinski, P.E. #17208
 Registered Professional Engineer
 State of Missouri
 for Buescher Frankenberg Associates, Inc.

PRELIMINARY DRAWING
 AUG 26 2002

FOR REVIEW PURPOSES ONLY
 NOT TO BE USED FOR CONSTRUCTION

**GRADING AND DRAINAGE PLAN
 SHOPPES AT LAKE ST. LOUIS**

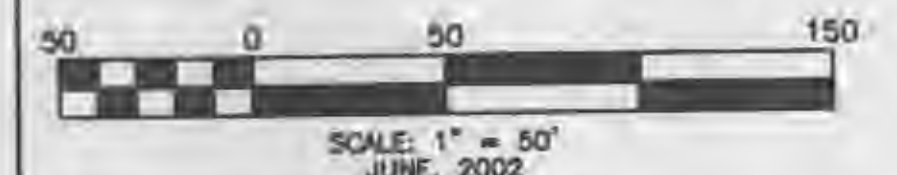
FOR SCHNUCK MARKETS INC.
 LAKE ST. LOUIS, ST. CHARLES CO., MISSOURI
**BUESCHER FRANKENBERG
 ASSOCIATES, INC.**
 1034 ELM STREET WASHINGTON, MISSOURI 63090

Two working days prior to the start of any excavation on this site, contractor shall call 1-800-DIG-RITE for utility location information.
 All OSHA rules & regulations established for the type of construction required by these plans shall be strictly followed (i.e. Trenching, Blasting, etc.).

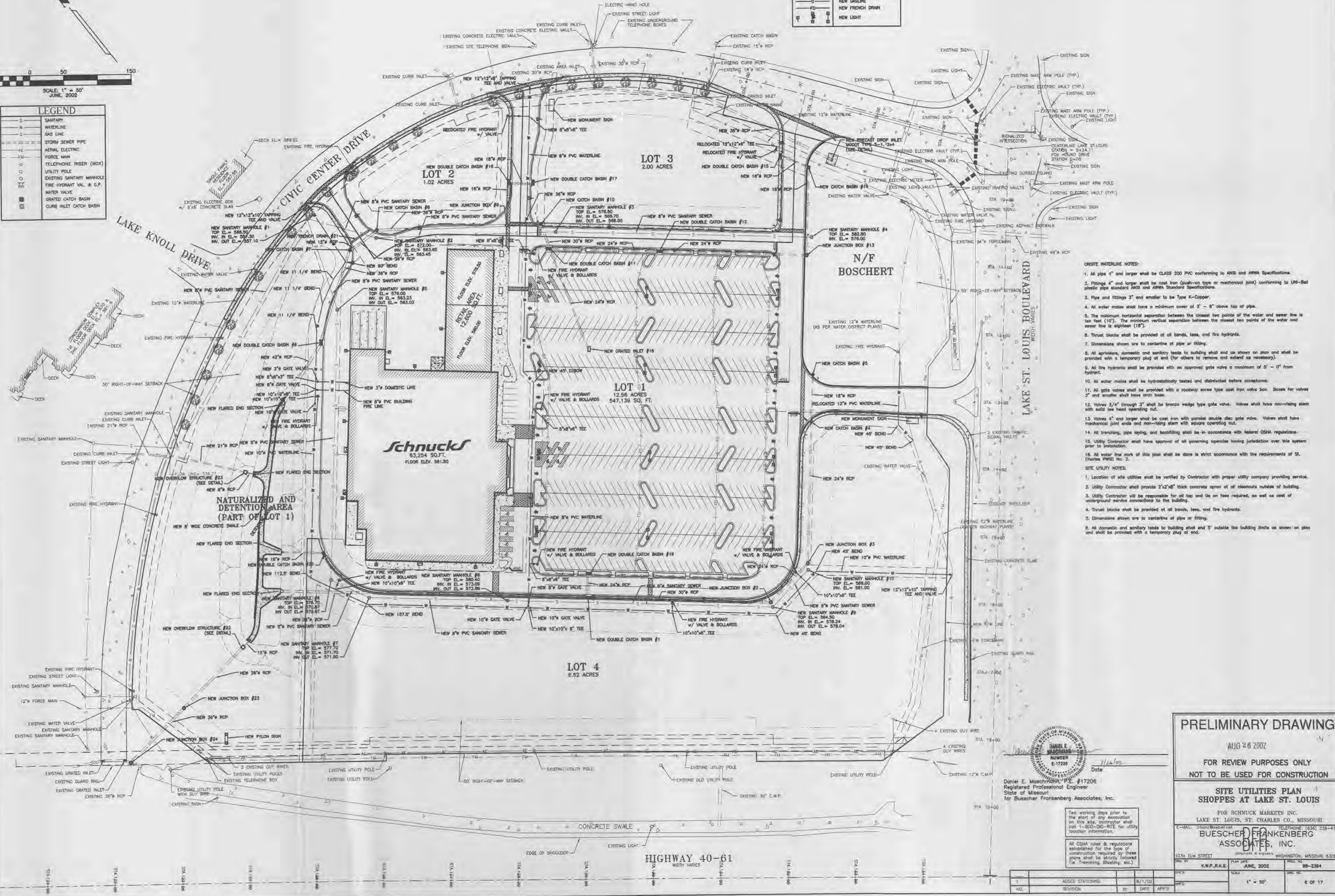
NO.	DATE	BY	REVISION
1	6/11/02	DLT	ADDED STATIONING
2	6/11/02	DLT	REVISION

SITE UTILITIES PLAN SHOPPES AT LAKE ST. LOUIS

NEW IMPROVEMENTS	
○	NEW FIRE HYDRANT
+	NEW GATE VALVE
—	NEW WATERLINE
—	NEW DOUBLE CATCH BASIN
—	NEW CATCH BASIN
—	NEW JUNCTION BOX
—	NEW STORM SEWER PIPE
—	NEW SANITARY MANHOLE
—	NEW SANITARY SEWER PIPE
—	NEW GASLINE
—	NEW FRENCH DRAIN
—	NEW LIGHT



LEGEND	
—	SANITARY
—	WATERLINE
—	GAS LINE
—	STORM SEWER PIPE
—	AERIAL ELECTRIC
—	FORCE MAIN
—	TELEPHONE RISER (BOX)
—	UTILITY POLE
—	EXISTING SANITARY MANHOLE
—	FIRE HYDRANT VAL. & G.P.
—	WATER VALVE
—	GRADED CATCH BASIN
—	CURB INLET CATCH BASIN



- ONSITE WATERLINE NOTES:**
1. All pipe 4" and larger shall be CLASS 200 PVC conforming to ANSI and AWWA Specifications.
 2. Fittings 4" and larger shall be cast iron (flange-on type or mechanical joint) conforming to UH-Ball plastic pipe standards ANSI and AWWA Standard Specifications.
 3. Pipe and fittings 3" and smaller to be Type K-Copper.
 4. All water mains shall have a minimum cover of 3' - 6" above top of pipe.
 5. The minimum horizontal separation between the closest two points of the water and sewer line is ten feet (10'). The minimum vertical separation between the closest two points of the water and sewer line is eighteen (18').
 6. Thrust blocks shall be provided at all bends, tees, and fire hydrants.
 7. Dimensions shown are to centerline of pipe or fitting.
 8. All agriculture, domestic and sanitary leads to building shall end as shown on plan and shall be provided with a temporary plug at end (for others to remove and sealed as necessary).
 9. All fire hydrants shall be provided with an approved gate valve a maximum of 2' - 0" from hydrant.
 10. All water mains shall be hydrostatically tested and disinfected before acceptance.
 11. All gate valves shall be provided with a recology screw type cast iron valve box. Boxes for valves 3" and smaller shall have each base.
 12. Valves 3/4" through 3" shall be bronze wedge type gate valve. Valves shall have non-rising stem with solid hex head operating nut.
 13. Valves 4" and larger shall be cast iron with parallel double disc gate valve. Valves shall have mechanical joint ends and non-rising stem with square operating nut.
 14. All trenching, pipe laying, and backfilling shall be in accordance with federal OSHA regulations.
 15. Utility Contractor shall have approval of all governing agencies having jurisdiction over this system prior to installation.
 16. All water line work of this plan shall be done in strict accordance with the requirements of St. Charles PDSD No. 2.

- SITE UTILITY NOTES:**
1. Location of site utilities shall be verified by Contractor with proper utility company providing service.
 2. Utility Contractor shall provide 2"x2"x8" thick concrete apron at all cleanouts outside of building.
 3. Utility Contractor shall be responsible for all top and tie in fees required, as well as cost of underground service connections to the building.
 4. Thrust blocks shall be provided at all bends, tees, and fire hydrants.
 5. Dimensions shown are to centerline of pipe or fitting.
 6. All domestic and sanitary leads to building shall end 5' outside the building limits as shown on plan and shall be provided with a temporary plug at end.



Daniel E. Moerschmann, P.E. #17206
Registered Professional Engineer
State of Missouri
for Buescher Frankenberg Associates, Inc.

Two working days prior to the start of any excavation on this site, contractor shall call 1-800-368-5848 for utility location information.

All OSHA rules & regulations applicable for the type of construction required by these plans shall be strictly followed (i.e. trenching, shoring, etc.)

PRELIMINARY DRAWING

AUG 26 2002
FOR REVIEW PURPOSES ONLY
NOT TO BE USED FOR CONSTRUCTION

**SITE UTILITIES PLAN
SHOPPES AT LAKE ST. LOUIS**
FOR SCHNUCK MARKETS INC.
LAKE ST. LOUIS, ST. CHARLES CO., MISSOURI
E-MAIL: frankenberg@buescher.com TELEPHONE: (636) 338-4751
BUESCHER FRANKENBERG ASSOCIATES, INC.

103a ELW STREET	PLAN DATE	8/1/02	DATE	8/1/02
BY: K.W.P./R.K.S.	SCALE	1" = 50'	NO.	90-2304
DATE	APPROVED			

SITE LIGHTING PLAN SHOPPES AT LAKE ST. LOUIS

SCHNUCK'S SITE DATA

Lots 1 thru 9
 22.09 AC.

Main Building Area (Lot 1)

Schnucks Building 53,254 SF
 Retail Building 12,600 SF
 Green Area 177,436 SF
 Drive Lane Area 75,180 SF
 Loading Area 44,023 SF
 Sidewalk Area 10,941 SF
 Parking Area 163,205 SF
 Total (Lot 1) Building Area 547,139 SF

Parking Requirements:

Local Parking Required
 Retail Food Store = 63,254/200 = 316
 Retail = 12,600/165 = 76
 Total Parking Required (LOT 1) 392

Parking Provided:

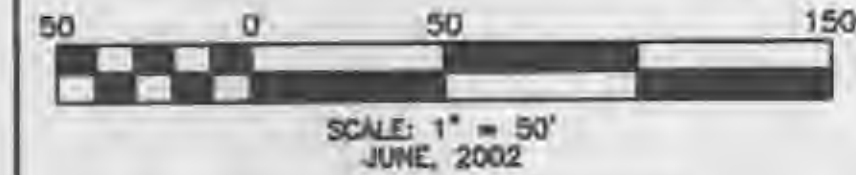
Standard 466
 Cart Corals 12
 Handicapped 13
 Total Parking Provided 491
 (see 4.7 (parking) AC)

NOTE:
 Property is Zoned "29" Community Business District, as per City Engineer.
 Setback Requirements:
 50 Feet - Minimum right-of-way setback
 45 Feet - Rear yard setbacks
 10 Feet - Side yard setbacks

Parking Requirements as per "Love Saint Louis Missouri - Development and Zoning Regulations"
 Retail Store - 1 per 165 sq.ft. of Gross Leasable Floor Area
 Retail Food Store - 1 per 200 sq.ft. of Gross Leasable Floor Area

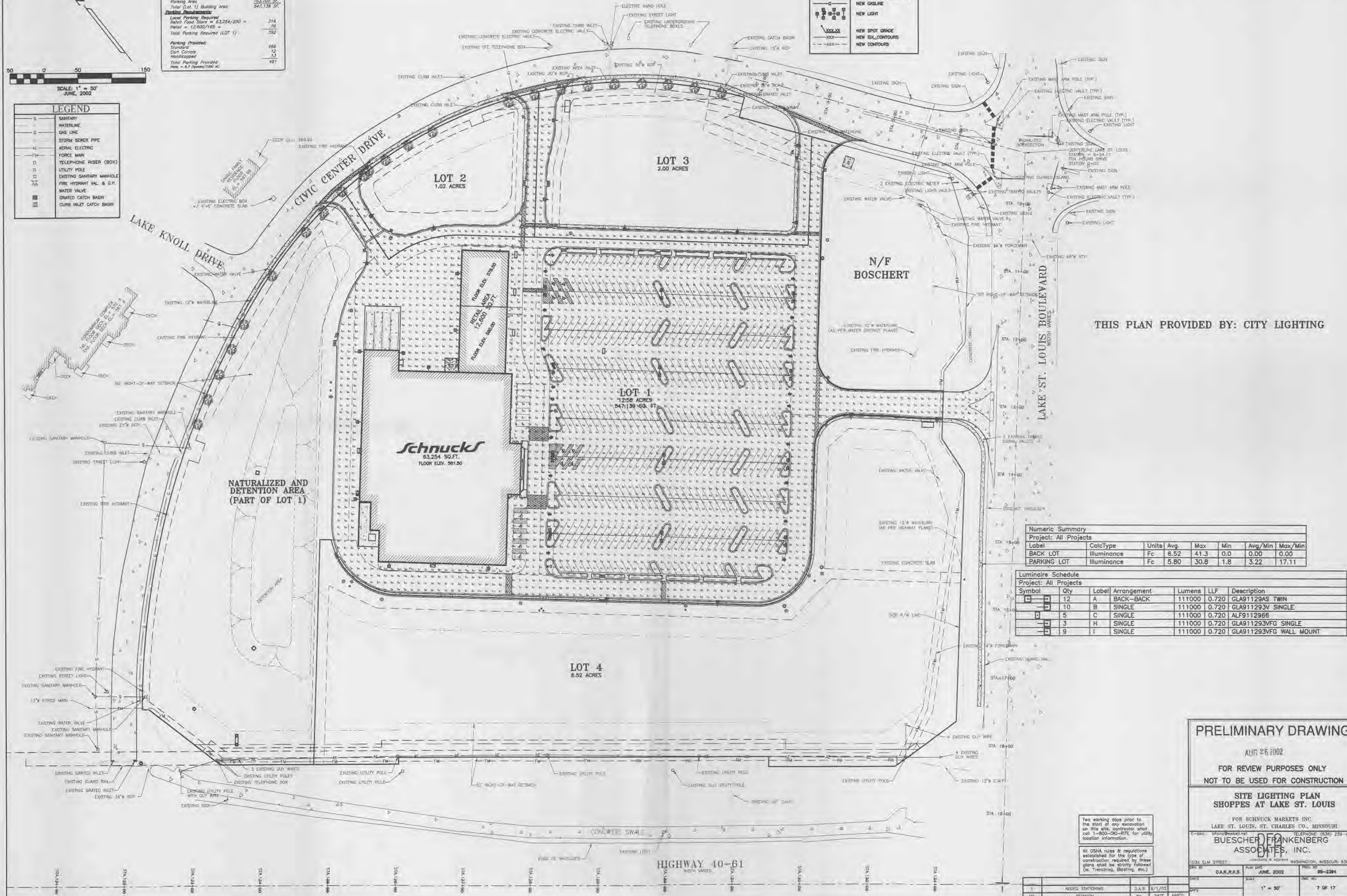
NEW IMPROVEMENTS

- NEW FIRE HYDRANT
- NEW GATE VALVE
- NEW WATERLINE
- NEW DOUBLE CATCH BASIN
- NEW JUNCTION BOX
- NEW STORM SEWER PIPE
- NEW SANITARY MANHOLE
- NEW SANITARY SEWER PIPE
- NEW GASLINE
- NEW LIGHT
- NEW SPOT GRADE
- NEW BOLL-COUNTERS
- NEW CONTOURS



LEGEND

- S — SANITARY
- W — WATERLINE
- G — GAS LINE
- SS — STORM SEWER PIPE
- AE — AERIAL ELECTRIC
- FM — FORCE MAIN
- TR — TELEPHONE RISER (BOX)
- U — UTILITY POLE
- SM — EXISTING SANITARY MANHOLE
- FV — FIRE HYDRANT VAL. & G.P.
- W — WATER VALVE
- CB — DRAINED CATCH BASIN
- CIB — CURB INLET CATCH BASIN



THIS PLAN PROVIDED BY: CITY LIGHTING

Numeric Summary
 Project: All Projects

Label	CalcType	Units	Avg.	Max	Min	Avg/Min	Max/Min
BACK LOT	Illuminance	Fc	6.52	41.3	0.0	0.00	0.00
PARKING LOT	Illuminance	Fc	5.60	30.8	1.8	3.22	17.11

Luminaire Schedule
 Project: All Projects

Symbol	Qty	Label	Arrangement	Lumens	LLF	Description
□	12	A	BACK-BACK	111000	0.720	GLA91129AS TWIN
□	10	B	SINGLE	111000	0.720	GLA911293V SINGLE
□	5	C	SINGLE	111000	0.720	ALF9112966
□	3	H	SINGLE	111000	0.720	GLA911293VFG SINGLE
□	9	I	SINGLE	111000	0.720	GLA911293VFG WALL MOUNT

Two working days prior to the start of any excavation on this site, contractor shall call 1-800-OG-RITE for utility location information.

All OSHA rules & regulations established for the type of construction required by these plans shall be strictly followed (ie. Trenching, Blasting, Etc.)

PRELIMINARY DRAWING

AUG 26 2002

FOR REVIEW PURPOSES ONLY
 NOT TO BE USED FOR CONSTRUCTION

**SITE LIGHTING PLAN
 SHOPPES AT LAKE ST. LOUIS**

FOR SCHNUCK MARKETS INC.
 LAKE ST. LOUIS, ST. CHARLES CO., MISSOURI

E-MAIL: gs@buescherfranken.com TELEPHONE: (636) 239-4751

**BUESCHER FRANKENBERG
 ASSOCIATES, INC.**

1038 ELM STREET WASHINGTON, MISSOURI 63090

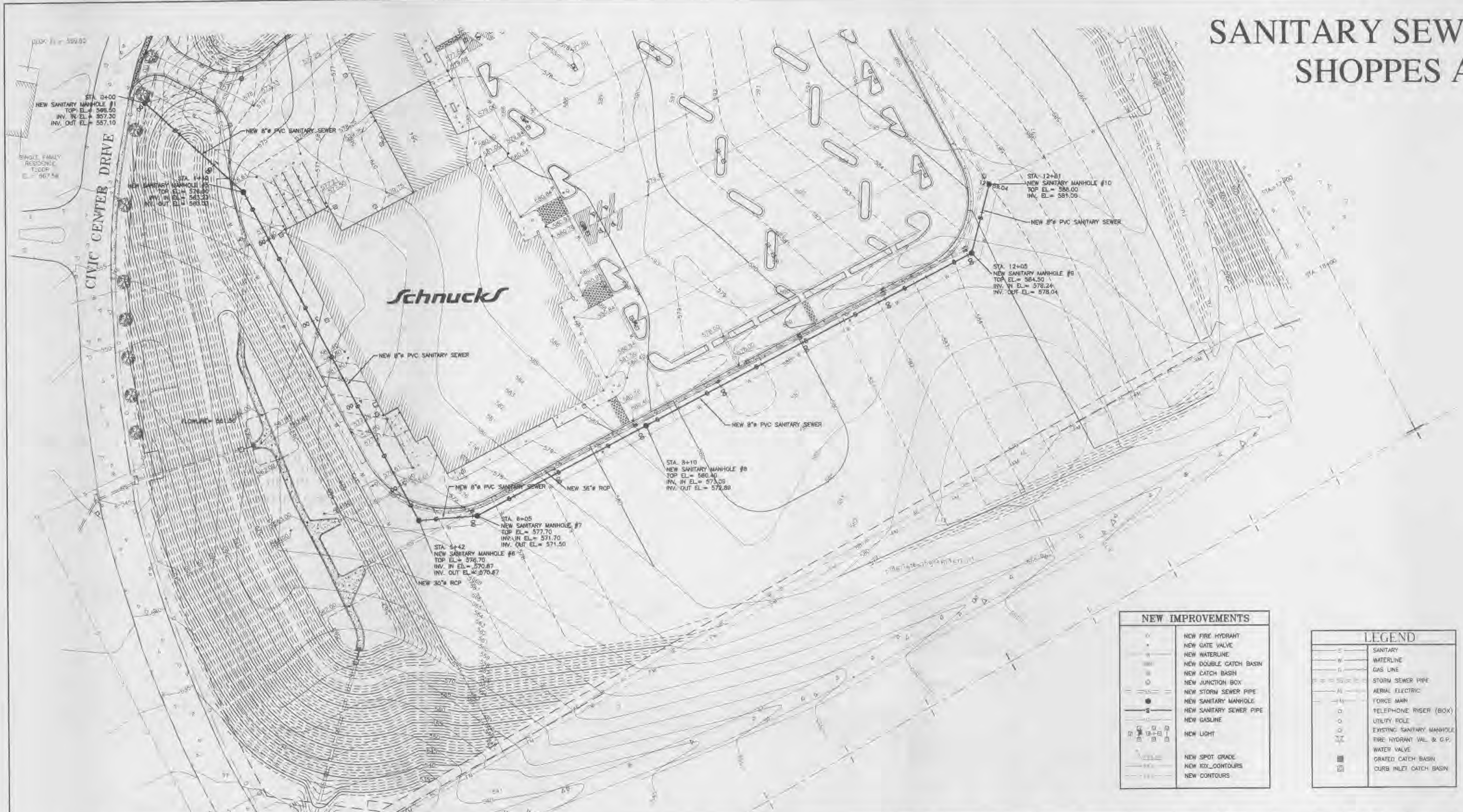
DATE: JUNE, 2002 DRAWING NO: 98-2384

NO.	DESCRIPTION	DATE	BY	APP'D
1	ADDED STATIONING	8/1/02	D.A.B.	
	REVISION			

SCALE: 1" = 50'

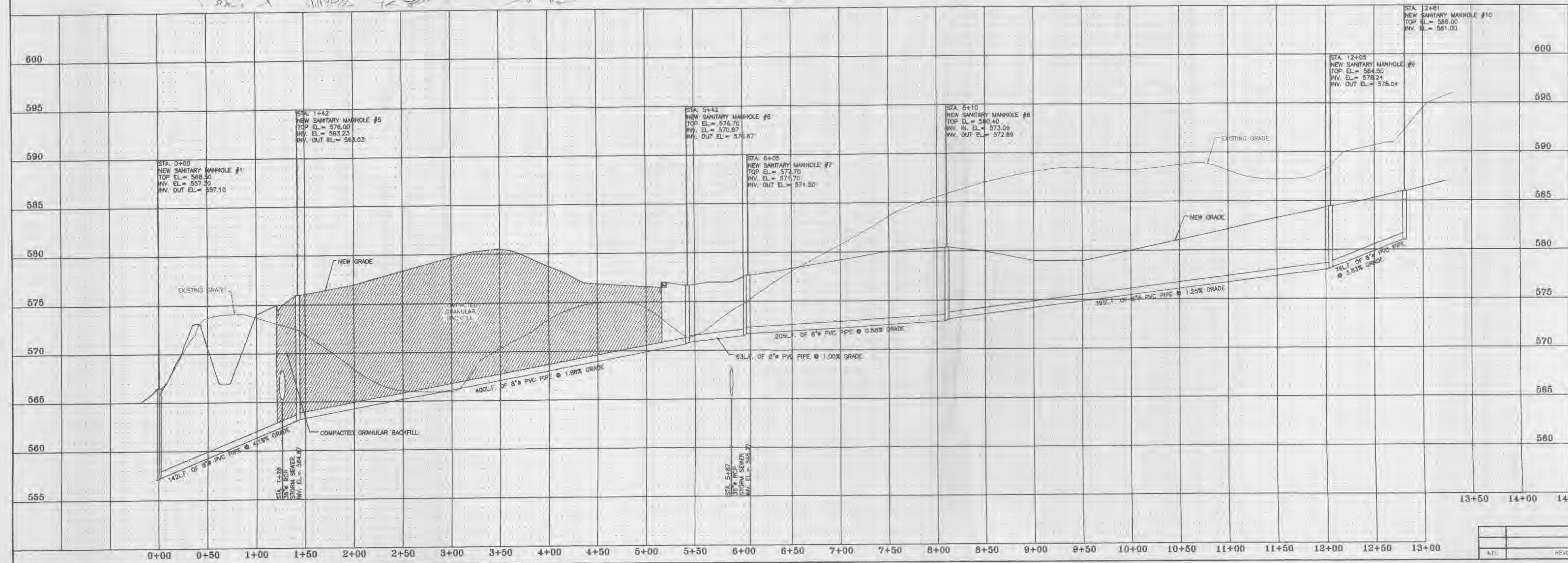
7 OF 17

SANITARY SEWER PLAN AND PROFILE SHOPPES AT LAKE ST. LOUIS



- NOTES:**
- The Contractor is specifically cautioned that the location and/or elevation of existing utilities as shown on these plans is based on records of the field. The information is not to be relied on as being exact or complete. The Contractor must call the appropriate utility company to request exact field location of utilities. It shall be the responsibility of the Contractor to relocate all existing utilities, which conflict with the proposed improvements shown on plans.
 - North derived from bearing of record for the centerline of Relocated Lake St. Louis Boulevard, Job No. J6P0672B, Sheet 9. (S39°-45'-20"W)
 - This site is Zoned "CB" Community Business District, as per City Engineer. Setback Requirements:
50 Feet - Minimum right-of-way setback
45 Feet - Rear yard setbacks
10 Feet - Side yard setbacks
 - This Site is "Zone X" Areas determined to be outside 500-year flood plain, as per FIRM Flood Insurance Rate Map for St. Charles County, Missouri and Incorporated Areas, Panel 220 of 525, Map No. 291630220 E, Map Revised August 2, 1996.
 - Field data obtained June, 1998 by M.R.F. and M.S.M.
 - Benchmark information as per Grading Plan for Old Lake St. Louis Boulevard by Stalvyk & Ferrenbach, Inc. dated November, 1984. Job No. 8306. U.S.C.S. Datum, Square on top of wing wall - N.E. corner of Bridge - East bound lane of Highway 40-61 over Perdue Creek, Elevation = 513.14
 - Contractor is to contact telephone, electric, gas, and water companies to have underground utilities located on this site and adjacent to this site prior to doing any excavating.
 - All trenches under paved areas shall be backfilled with granular material and compacted to meet compaction requirements for the parking lot.
 - All unsurfaced areas are to receive twelve inches of topsoil. Contractor to seed, mulch, fertilize, and maintain all areas outside of paved areas that were disturbed during construction until an acceptable stand of grass is established. The contractor shall be responsible to take whatever means necessary to establish permanent soil stabilization.
 - The contractor is responsible for keeping storm water run-off and siltation under control during construction.
 - Contractor shall refer to architectural plans for exact locations and dimensions of vestibule, sloped paving, exit porches, ramps, truck docks, precise building dimensions, exact building utility entrance locations and exact number and location of downspouts.
 - All survey monuments disturbed during construction shall be replaced by a licensed land surveyor licensed in the state this project is located.
 - All existing structures, unless otherwise noted to remain, fencing, trees, and etc., within construction area shall be removed and disposed of off site. Any burning on site shall be subject to local ordinances and Lowe's specifications.
 - It shall be the contractors responsibility to keep all mud and silt on-site and off of streets. Contractor shall establish a construction access wash down area at each construction access location.
 - All pipe lengths and slope data have been provided for convenience only. Contractor to verify all lengths and grades.

NEW IMPROVEMENTS		LEGEND	
●	NEW FIRE HYDRANT	—	SANITARY
○	NEW GATE VALVE	—	WATERLINE
—	NEW WATERLINE	—	GAS LINE
—	NEW DOUBLE CATCH BASIN	—	STORM SEWER PIPE
—	NEW CATCH BASIN	—	AERIAL ELECTRIC
—	NEW JUNCTION BOY	—	FORCE MAIN
—	NEW STORM SEWER PIPE	—	TELEPHONE RISER (BOX)
—	NEW SANITARY MANHOLE	—	UTILITY POLE
—	NEW SANITARY SEWER PIPE	—	EXISTING SANITARY MANHOLE
—	NEW GASLINE	—	FIRE HYDRANT VAL. & G.P.
—	NEW LIGHT	—	WATER VALVE
—	NEW SPOT GRADE	—	GRADED CATCH BASIN
—	NEW HILLOUTLINES	—	CURB INLET CATCH BASIN
—	NEW CONTOURS		



State of Missouri
 Daniel E. Maschman #17206
 Registered Professional Engineer
 for Buescher Frankenberg Associates, Inc.

PRELIMINARY DRAWING
 AUG 26 2002
 FOR REVIEW PURPOSES ONLY
 NOT TO BE USED FOR CONSTRUCTION

**SANITARY SEWER PLAN & PROFILE
 SHOPPES AT LAKE ST. LOUIS**

FOR SCHNUCK MARKETS INC.
 LAKE ST. LOUIS, ST. CHARLES CO., MISSOURI

E-mail: slm@bfa.com TELEPHONE: (636) 239-4151

**BUESCHER FRANKENBERG
 ASSOCIATES, INC.**

1030 ELM STREET WASHINGTON, MISSOURI 63090
 D.A.R., R.K.S. PLAN DATE: JUNE, 2002 PROJ. NO. 86-2384
 SHEET NO. 8 OF 17

Two working days prior to the start of any excavation on this site, contractor shall call 1-800-DIG-RITE for utility location information.

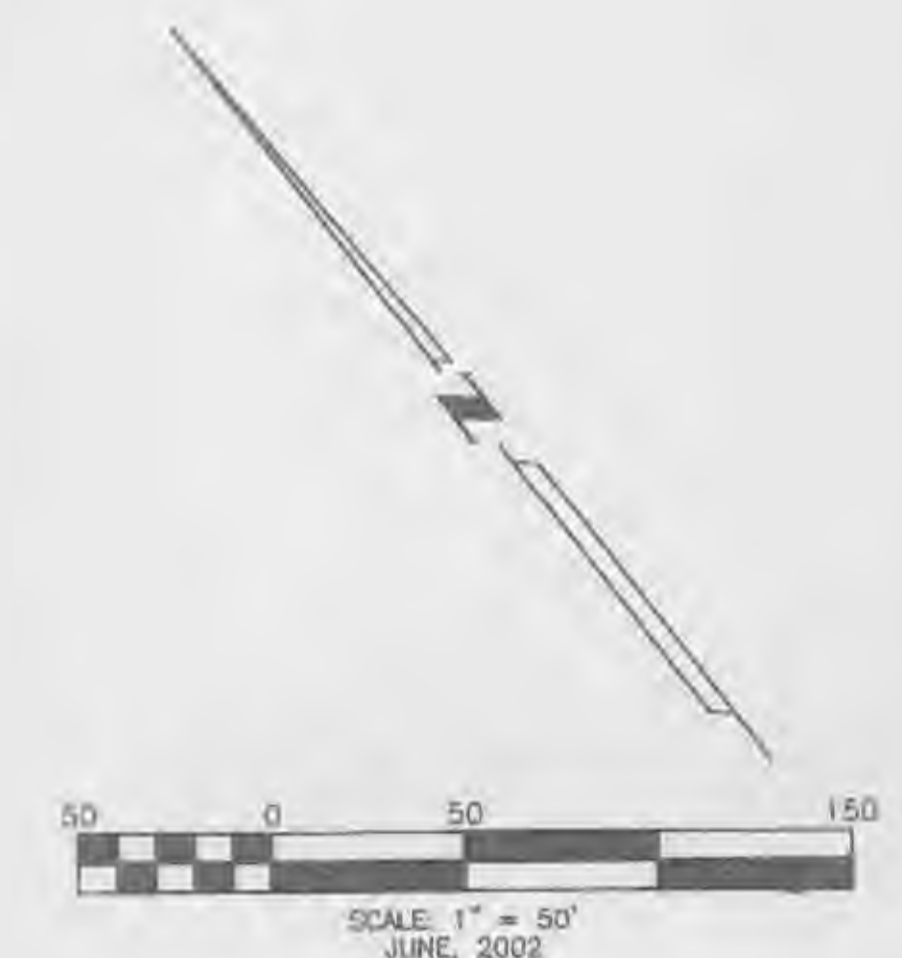
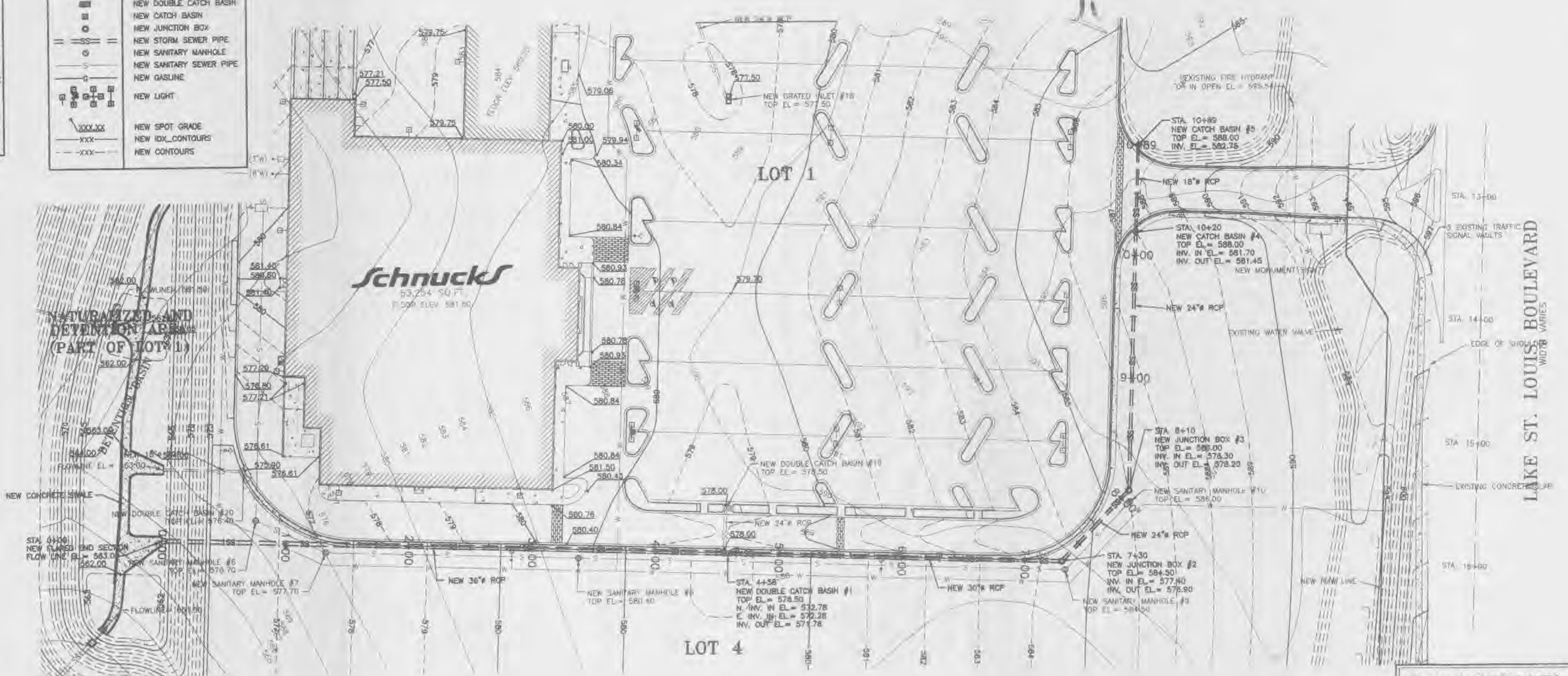
All OSHA rules & regulations established for the type of construction required by these plans shall be strictly followed (ie. trenching, shoring, etc.)

NO.	REVISION	BY	DATE	APP'D.

STORM SEWER PLAN AND PROFILE SHOPPES AT LAKE ST. LOUIS

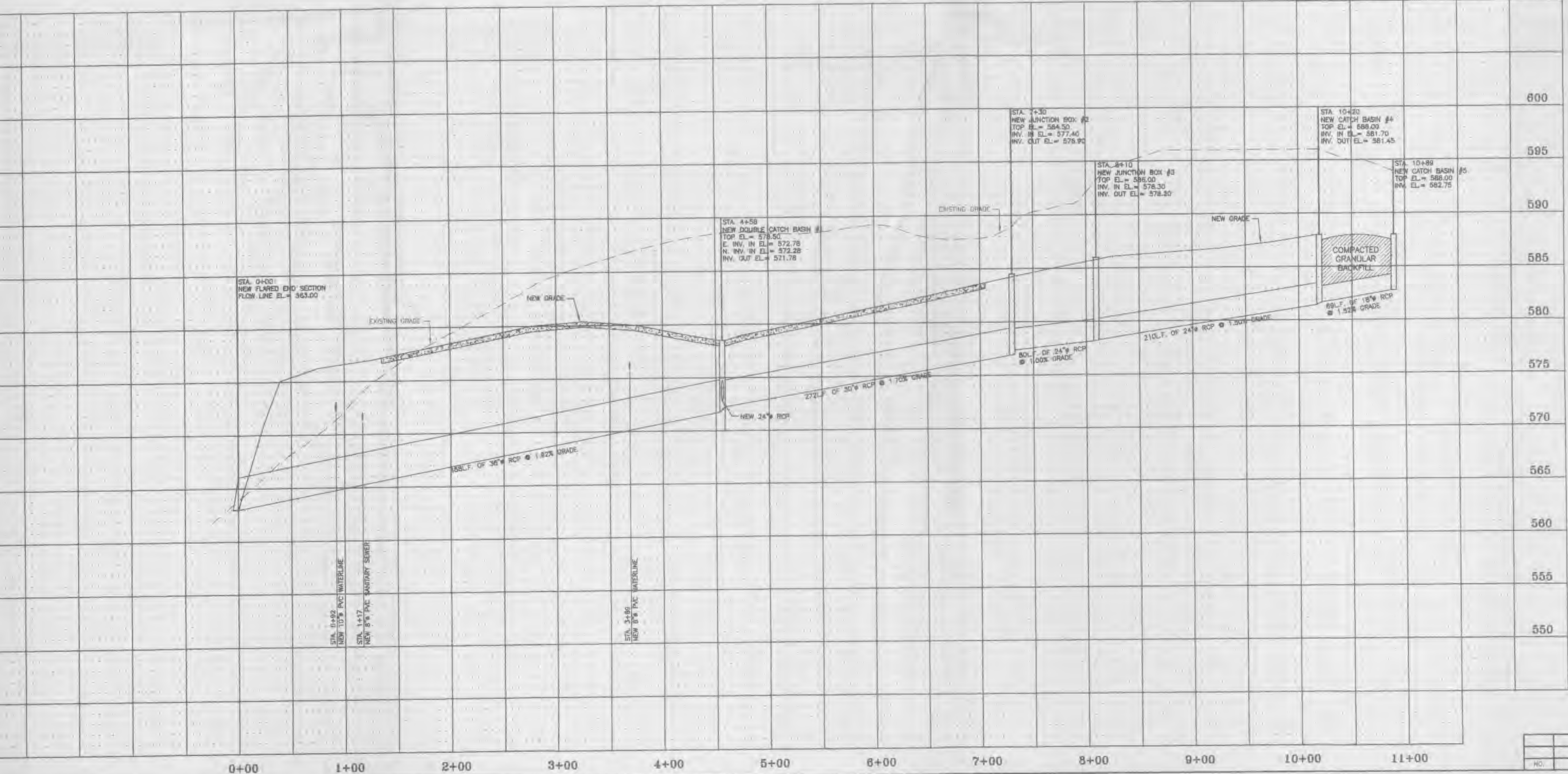
LEGEND	
○	NEW FIRE HYDRANT
●	NEW GATE VALVE
—	NEW WATERLINE
—	NEW GAS LINE
—	STORM SEWER PIPE
—	AERIAL ELECTRIC
—	FORCE MAIN
—	TELEPHONE RISER (BOX)
—	UTILITY POLE
—	EXISTING SANITARY MANHOLE
—	FIRE HYDRANT VAL. & G.P.
—	WATER VALVE
—	GRAVED CATCH BASIN
—	CURB INLET CATCH BASIN

NEW IMPROVEMENTS	
○	NEW FIRE HYDRANT
●	NEW GATE VALVE
—	NEW WATERLINE
—	NEW GAS LINE
—	STORM SEWER PIPE
—	AERIAL ELECTRIC
—	FORCE MAIN
—	TELEPHONE RISER (BOX)
—	UTILITY POLE
—	EXISTING SANITARY MANHOLE
—	FIRE HYDRANT VAL. & G.P.
—	WATER VALVE
—	GRAVED CATCH BASIN
—	CURB INLET CATCH BASIN



PRELIMINARY DRAWING
FOR REVIEW PURPOSES ONLY
NOT TO BE USED FOR CONSTRUCTION

- NOTES:
- The Contractor is specifically cautioned that the location and/or elevation of existing utilities as shown on these plans is based on records of the various utility companies and, where possible, measurements taken in the field. The information is not to be relied on as being exact or complete. The Contractor must call the appropriate utility company to request exact field location of utilities. It shall be the responsibility of the Contractor to relocate all existing utilities which conflict with the proposed improvements shown on plans.
 - North derived from bearing of record for the centerline of Relocated Lake St. Louis Boulevard, Job No. JEP0672B, Sheet 2. (S30°45'-20"W)
 - This site is zoned "CB" Community Business District, as per City Engineer. Setback Requirements:
20 Feet - Minimum right-of-way setback
45 Feet - Rear yard setback
10 Feet - Side yard setback
 - This site is "Zone X" Areas determined to be outside 500-year flood plain, as per FIRM Flood Insurance Rate Map for St. Charles County, Missouri and Incorporated Areas, Panel 220 of 225, Map No. 2818300220 E, Map Revised August 2, 1999.
 - Field data obtained June, 1995 by M.R.F. and M.S.M.
 - Benchmark information as per Grading Plan for Old Lake St. Louis Boulevard by Staley & Farnsworth, Inc. dated November, 1984, Job No. 6328. U.S.G.S. Datum, Square on top of wing wall - N.E. corner of Bridge - East bound line of Highway 40-61 over Purgus Crater. Elevation = 513.14'
 - All trenches under paved areas shall be backfilled with granular material and compacted to meet compaction requirements for the parking lot.
 - All unpaved areas are to receive twelve inches of topsoil. Contractor to seed, mulch, fertilize, and maintain all areas outside of paved areas that were disturbed during construction until an acceptable stand of grass is established. The contractor shall be responsible to take whatever means necessary to establish permanent soil stabilization.
 - Contractor shall refer to architectural plans for exact locations and dimensions of vestibule, sloped paving, exit porches, ramps, truck docks, precise building dimensions, exact building utility entrance locations, and exact number and location of downspouts.
 - All survey monuments disturbed during construction shall be replaced by a licensed land surveyor licensed in the state in which this project is located at the contractor's expense.
 - The earthwork for all building foundations and slabs shall be in accordance with architect's plans and specifications.
 - Foamfill shall be placed perpendicular to the finished contours on parking lot.
 - The Contractor is responsible for keeping storm water run-off and siltation under control during construction. Contractor shall comply with all state and local ordinances that apply to erosion control.
 - Contractor to obtain and follow installation requirements for storm sewer from pipe manufacturer for each type of piping material.
 - Contractor shall coordinate adjustments to existing utilities with appropriate utility company as work progresses.
 - All pipe lengths and slope data have been provided for convenience only. Contractor to verify all lengths and grades.
 - All underground electric and telephone wires that lie beneath paved areas shall be installed in conduit. Contractor shall coordinate with each utility service provider for site and type of conduit required.
 - Contractor shall coordinate with electric company to determine size of transformer post required and design specifications.
 - Stational coordinates will be provided by Buescher Frankenberg Associates, Inc. for contractors convenience upon request.
 - All excavation of any kind shall be included as part of the utility cost. No additional compensation will be allowed for solid rock removal.
 - Land disturbing activities shall not commence until approval to do so has been received by governing authorities.
 - All existing structures, fencing, trees, and etc., within construction area shall be removed and disposed of off site. Any burning on site shall be subject to local ordinances.
 - All earthwork and excavations shall be in accordance with "Geotechnical Investigation - Proposed Supermarket and Retail Development - Lake St. Louis, Missouri", as prepared by Midwest Testing, Inc., dated July 24, 1998.



[Signature]
Date: 7/26/02
Daniel E. Maschmann #17206
Registered Professional Engineer
State of Missouri
for Buescher Frankenberg Associates, Inc.

AUG 26 2002

Two working days prior to the start of any excavation on this site, Contractor shall call 1-800-000-RTS for utility location information.

All OSHA rules & regulations established for the type of construction required by these plans shall be strictly followed (i.e. trenching, blasting, etc.)

**STORM SEWER PLAN AND PROFILE
SHOPPES AT LAKE ST. LOUIS**

FOR SCHNUCK MARKETS INC.
LAKE ST. LOUIS, ST. CHARLES CO., MISSOURI

E-Mail: blonch@bfi.net Telephone: (636) 239-4751
**BUESCHER FRANKENBERG
ASSOCIATES, INC.**

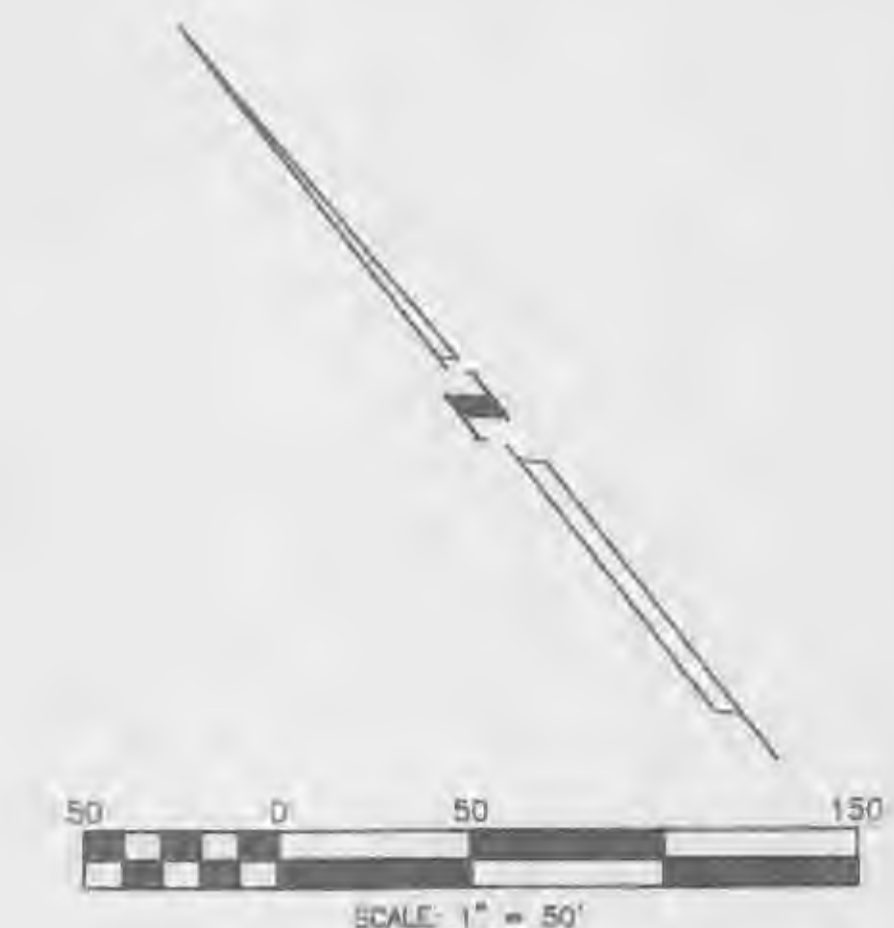
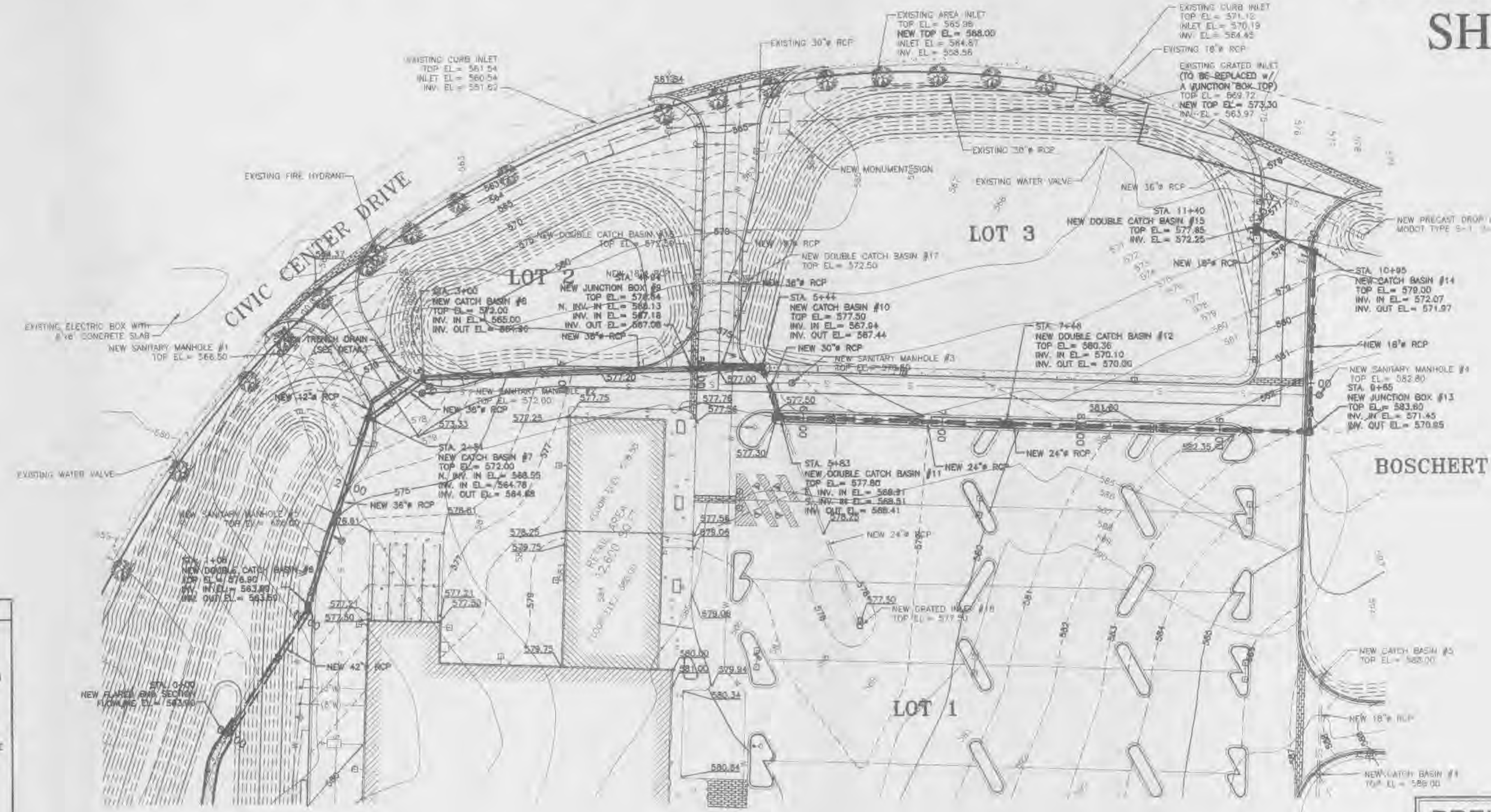
1030 ELM STREET ST. LOUIS, MO 63102	DATE: JUNE 2001	SCALE: HORIZ. 1"=50' VERT. 1"=5'	DATE: 08-23-04
DRN BY: K.W.P., R.K.S.	DATE: JUNE 2001	SCALE: HORIZ. 1"=50' VERT. 1"=5'	DATE: 10 OF 17
APP'D:	DATE:	DATE:	DATE:

STORM SEWER PLAN AND PROFILE SHOPPES AT LAKE ST. LOUIS

NOTES: Soil Preparation and Compaction

Remove all stumps, bushes, trees, and weeds, roots, and other surface obstructions from the site. Contractor to strip off topsoil from the entire area to be graded. After the removal of all foreign organic matter, and after stripping of topsoil, the entire surface to be filled or areas that are cut to subgrade shall be scarified to a minimum depth of 12 inches, and then compacted by proof-rolling with suitable compaction equipment weighing not less than 400 pounds on the contact area of one row of feet, or pneumatic-tired roller of equivalent composition characteristics.

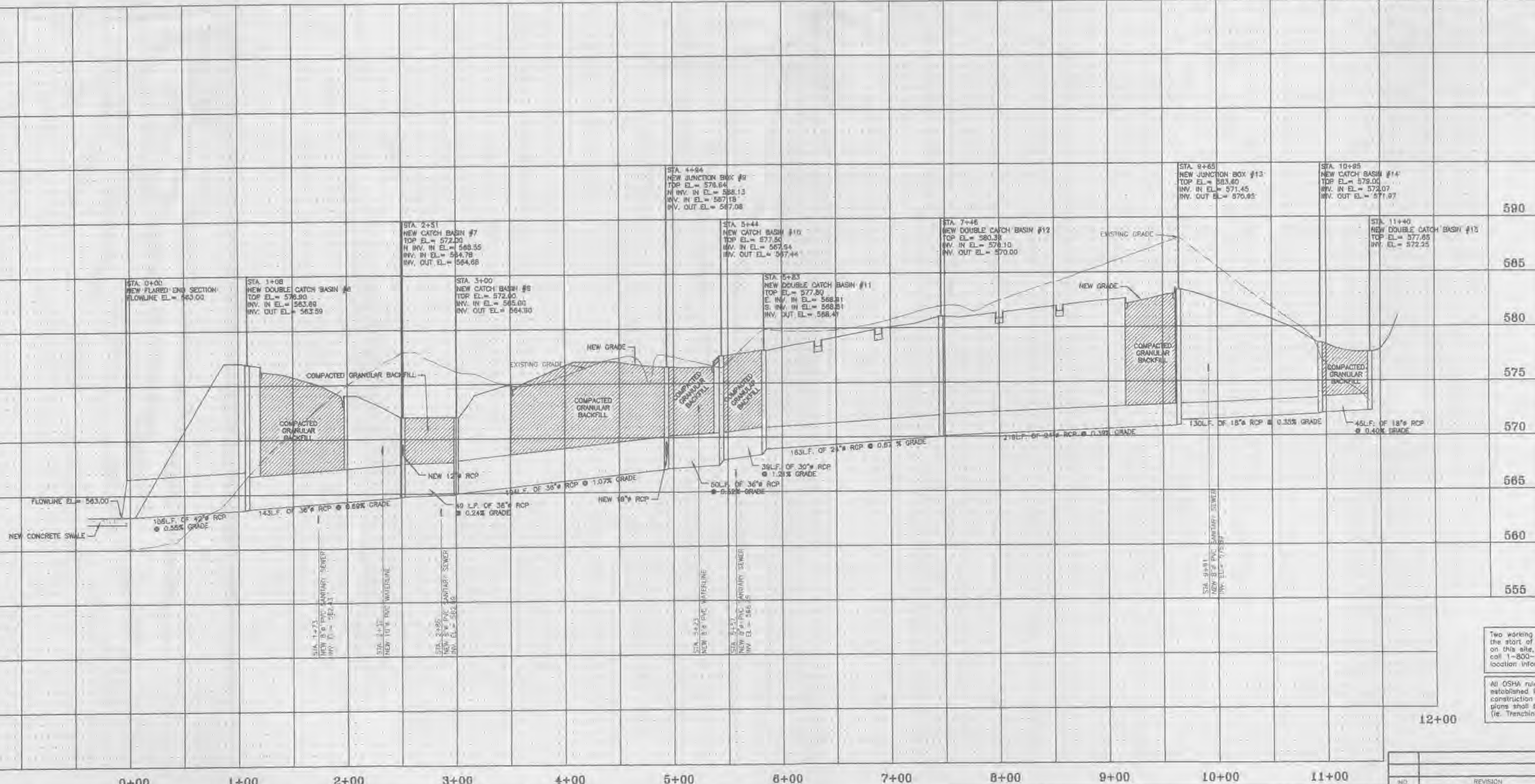
The maximum thickness of fill shall be in lifts not to exceed 8 inches. The proof-rolling and the fill-compaction operations under the building and paved areas shall produce at least 95% of the maximum dry density as determined by the Standard Proctor (ASTM D 698). Any soft areas encountered during proof-rolling shall be undercut and replaced with a qualified soil subgrade to be determined if the proper densification is taking place. All fill used on the site should consist of low plasticity soils as approved by the soils engineer. After proof-rolling, no water should be allowed to pond on the surface. The earthwork for all building foundations and slope shall be in accordance with architectural building plans and specifications. Compaction equipment shall be operating on the site at all times during filling operations.



LEGEND	
—	NEW FIRE HYDRANT
—	NEW GATE VALVE
—	NEW WATERLINE
—	NEW DOUBLE CATCH BASIN
—	NEW CATCH BASIN
—	NEW JUNCTION BOX
—	NEW STORM SEWER PIPE
—	NEW SANITARY MANHOLE
—	NEW SANITARY SEWER PIPE
—	NEW GASLINE
—	NEW LIGHT
—	NEW SPOT GRADE
—	NEW IDL/CONTOURS
—	NEW CONTOURS

PRELIMINARY DRAWING
FOR REVIEW PURPOSES ONLY
NOT TO BE USED FOR CONSTRUCTION

- NOTES:
- The Contractor is specifically cautioned that the location and/or elevation of existing utilities as shown on these plans is based on records of the various utility companies and, where possible, measurements taken in the field. The Contractor must call the appropriate utility company to request exact field location of utilities. It shall be the responsibility of the Contractor to relocate all existing utilities which conflict with the proposed improvements shown on plans.
 - North derived from bearing of record for the delineation of Replat of Lake St. Louis Boulevard, Job No. JSP06728, Sheet 9. (S37°45'—20" W)
 - This site is zoned "CB" Community Business District, as per City Engineer. Setback Requirements:
30 Feet - Minimum right-of-way setback
45 Feet - Rear yard setback
10 Feet - Side yard setback
 - This site is "Zone 2" Areas determined to be outside 300-year flood plain, as per FEMA Flood Insurance Rate Map for St. Charles County, Missouri and Incorporated Areas, Panel 220 of 225, Map No. 2518300220 E, Map Revised August 2, 1996.
 - Field data obtained June, 1998 by M.R.F. and M.S.M.
 - Benchmark information as per Grading Plan for Old Lake St. Louis Boulevard by Stuehly & Ferrenbach, Inc. dated November, 1984, Job No. 6308, U.S.G.S. Datum, Square on top of wing wall - N.E. corner of Bridge - East bound lane of Highway 40-61 over Paragou Creek. Elevation = 513.14'
 - All trenches under paved areas shall be backfilled with granular material and compacted to meet compaction requirements for the parking lot.
 - All unsurfaced areas are to receive twelve inches of topsoil. Contractor to seed, mulch, fertilize, and maintain all areas outside of paved areas that were disturbed during construction until an acceptable stand of grass is established. The contractor shall be responsible to take whatever means necessary to establish permanent soil stabilization.
 - Contractor shall refer to architectural plans for exact locations and dimensions of vestibules, sloped paving, exit porches, ramps, truck docks, precise building dimensions, exact building utility entrance locations, and exact number and location of downspouts.
 - All survey monuments disturbed during construction shall be replaced by a licensed land surveyor licensed in the state in which this project is located at the contractor's expense.
 - The earthwork for all building foundations and slope shall be in accordance with architect's plans and specifications.
 - Pavement shall be placed perpendicular to the finished contours on parking lot.
 - The Contractor is responsible for keeping storm water run-off and all other under control during construction. Contractor shall comply with all state and local ordinances that apply to erosion control.
 - Contractor to obtain and follow installation requirements for storm sewer from pipe manufacturer for each type of piping material.
 - Contractor shall coordinate adjustments to existing utilities with appropriate utility company as work progresses.
 - All pipe lengths and slope data have been provided for convenience only. Contractor to verify all lengths and grades.
 - All underground electric and telephone wires that lie beneath paved areas shall be marked in conduit. Contractor shall coordinate with each utility service provider for size and type of conduit required.
 - Contractor shall coordinate with electric company to determine size of transformer pad required and design specifications.
 - Stakeout coordinates will be provided by Buescher Frankenberg Associates, Inc. for contractor's convenience upon request.
 - All excavation of any kind shall be included as part of the utility cost. No additional compensation will be allowed for solid rock removal.
 - Land disturbing activities shall not commence until approval to do so has been received by governing authorities.
 - All existing structures, fencing, trees, and etc., within construction area shall be removed and disposed of off site. Any burning on site shall be subject to local ordinances.
 - All earthwork and excavations shall be in accordance with "GeoTechnical Investigation - Proposed Supermarket and Retail Development - Lake St. Louis, Missouri", as prepared by Midwest Testing, Inc., dated July 24, 1998.

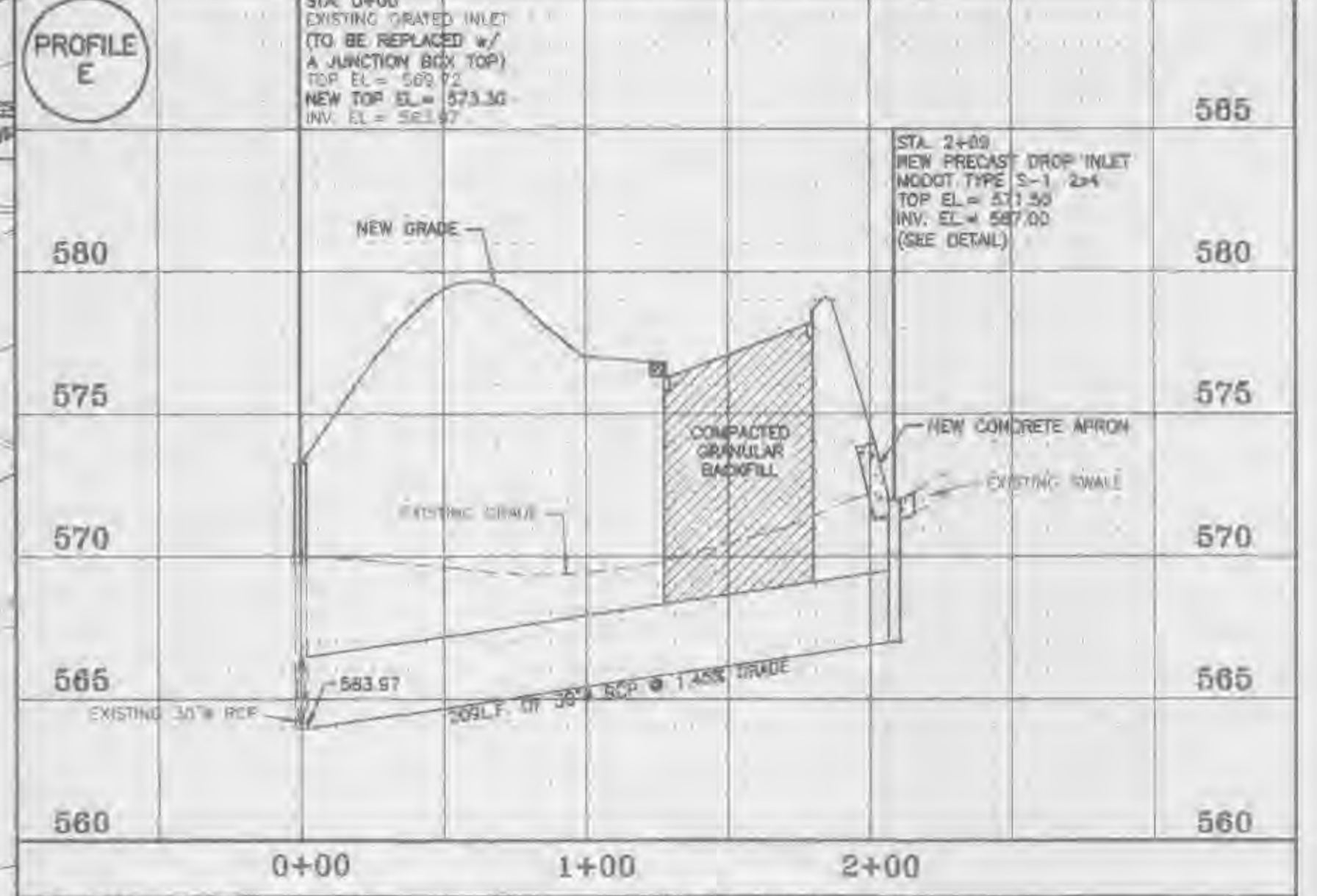
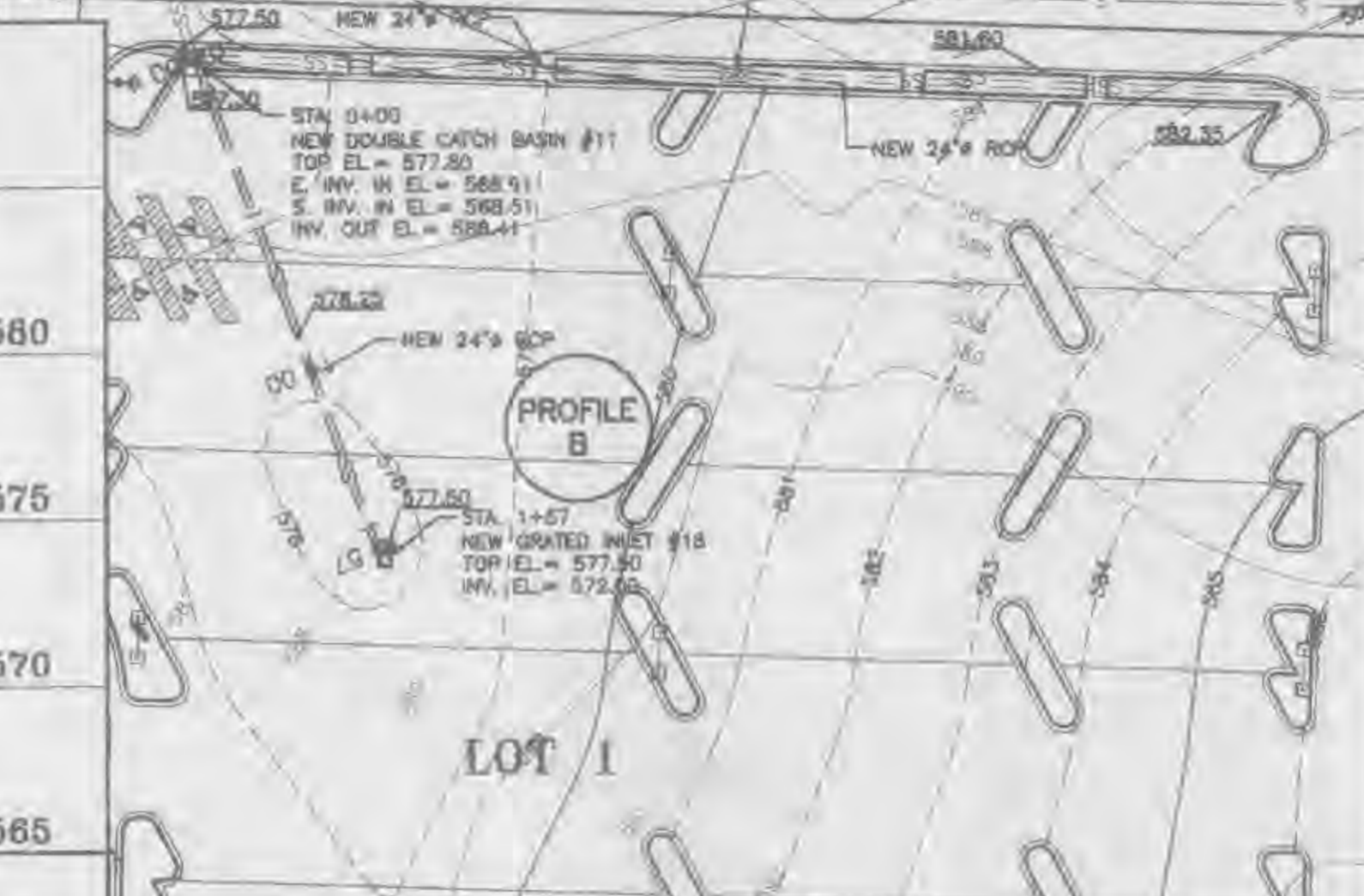
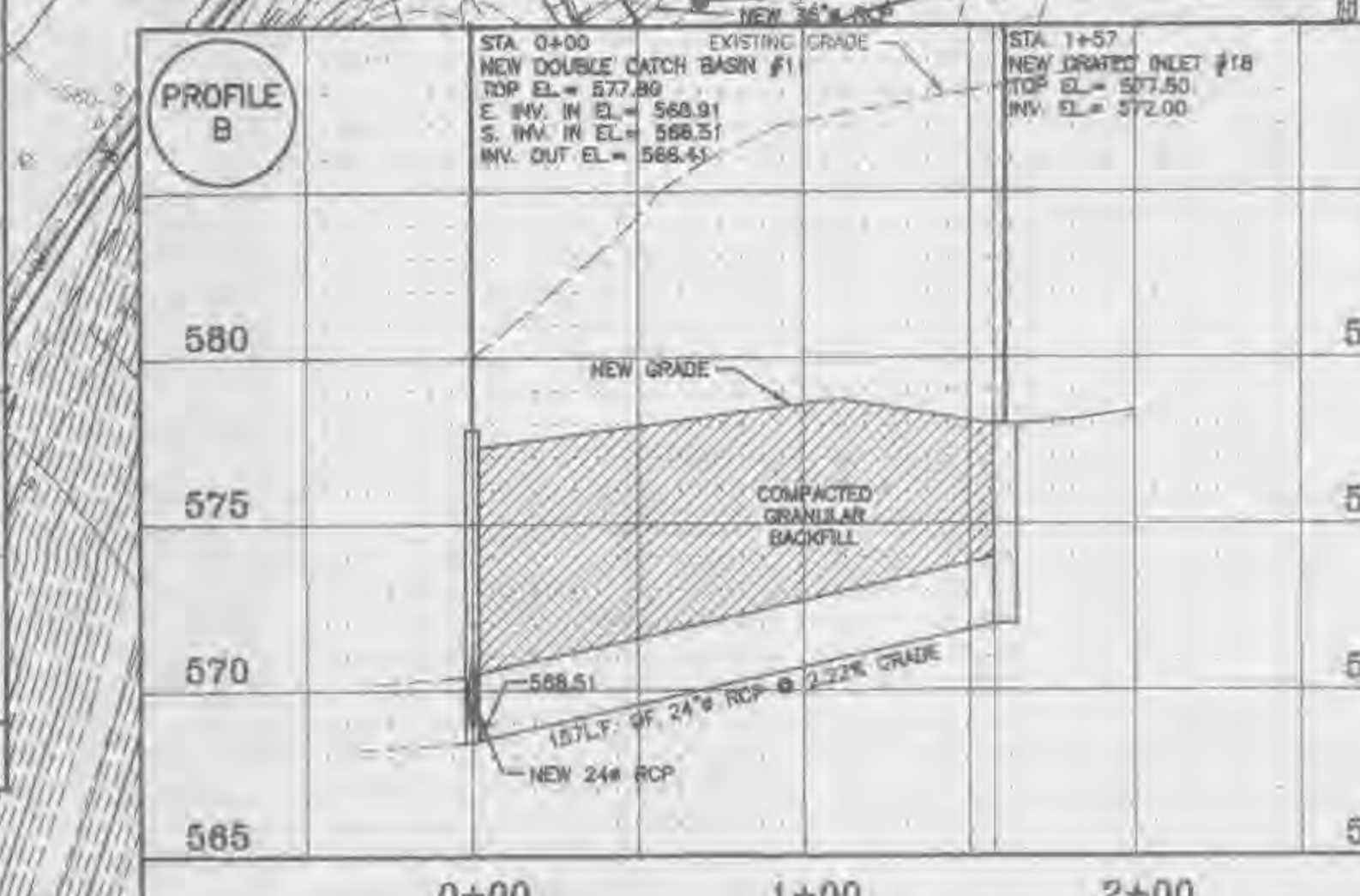
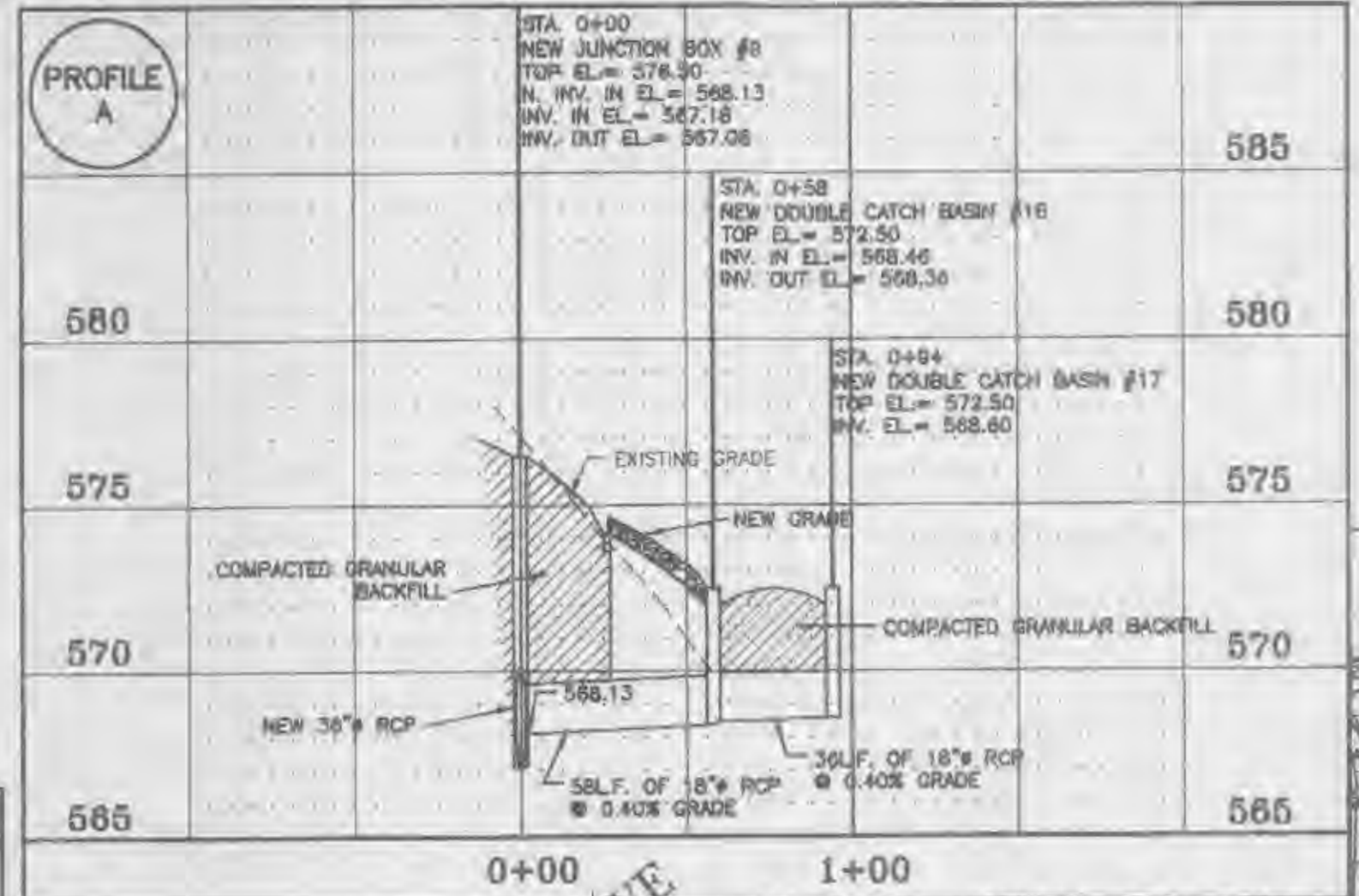
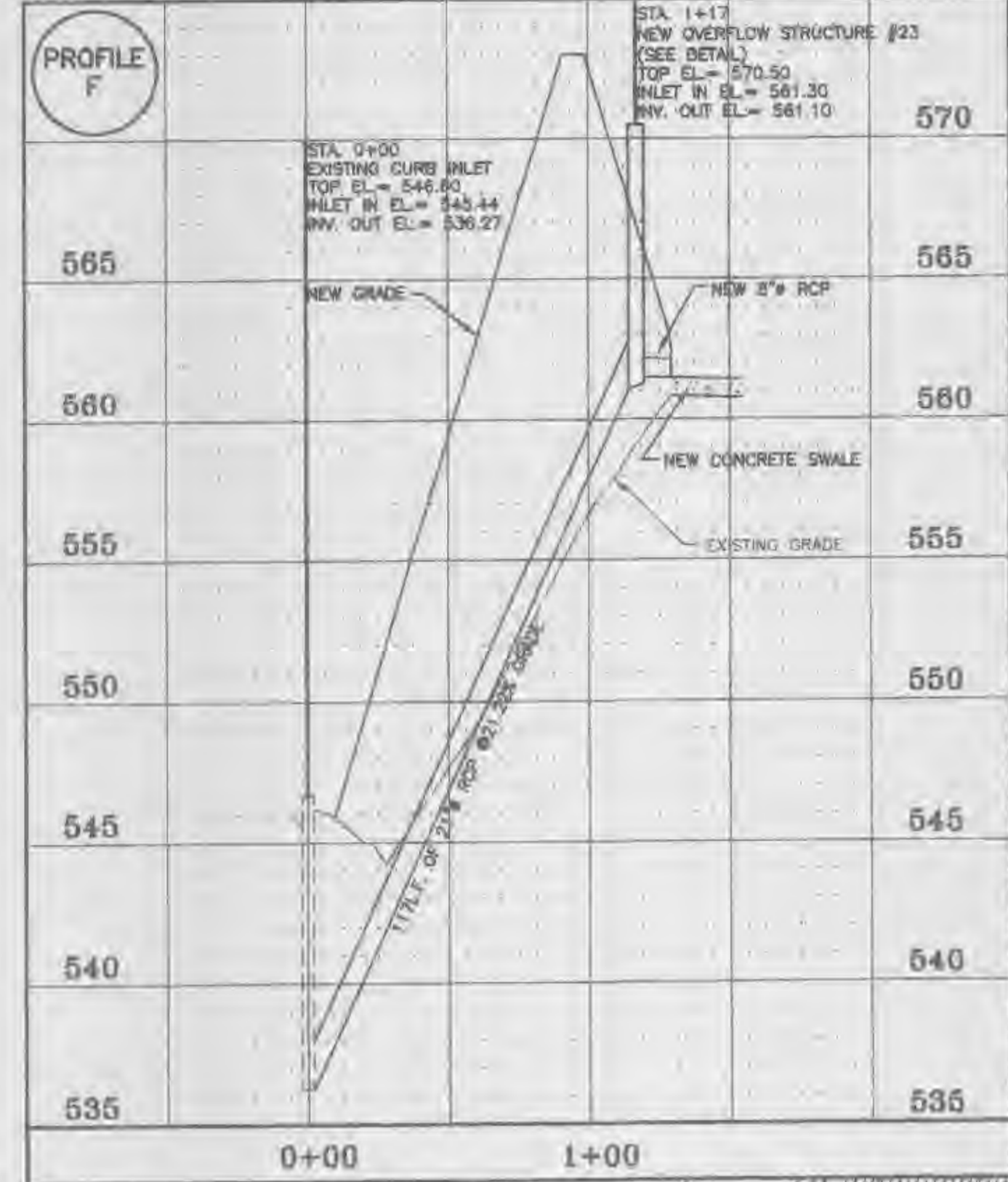
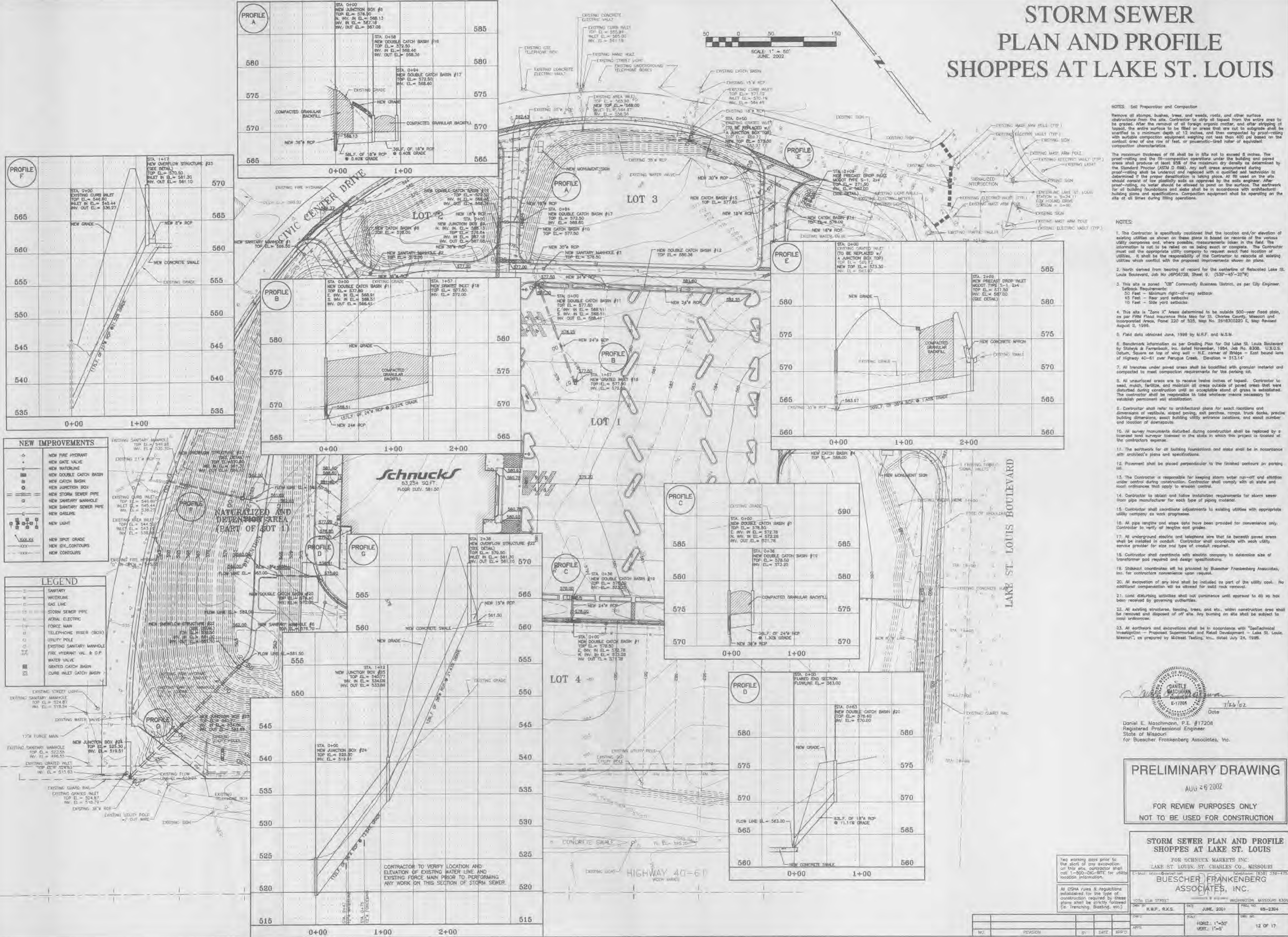
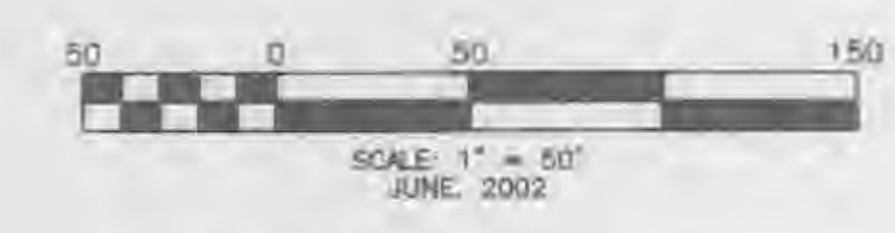


Daniel E. Maschmeyer
Professional Engineer
#17206
State of Missouri
for Buescher Frankenberg Associates, Inc.
Date: 7/26/02
AUG 26 2002

PRELIMINARY STORM SEWER PLAN AND PROFILE SHOPPES AT LAKE ST. LOUIS
FOR SACHNICK MARKETS INC.
LAKE ST. LOUIS, ST. CHARLES CO., MISSOURI
L-MAIL: BUESCHERFRANKENBERG@ATTN.COM TEL: (636) 258-4751
BUESCHER FRANKENBERG ASSOCIATES, INC.
103 1/2 ELM STREET WASHINGTON, MISSOURI 63090

NO.	REVISION	BY	DATE	APPROVED

STORM SEWER PLAN AND PROFILE SHOPPES AT LAKE ST. LOUIS



- NEW IMPROVEMENTS**
- NEW FIRE HYDRANT
 - NEW GATE VALVE
 - NEW WATERLINE
 - NEW DOUBLE CATCH BASIN
 - NEW CATCH BASIN
 - NEW JUNCTION BOX
 - NEW STORM SEWER PIPE
 - NEW SANITARY MANHOLE
 - NEW SANITARY SEWER PIPE
 - NEW GASLINE
 - NEW LIGHT
 - NEW SPOT GRADE
 - NEW ELEVATION CONTOURS
 - NEW CONTOURS

- LEGEND**
- SANITARY
 - WATERLINE
 - GAS LINE
 - STORM SEWER PIPE
 - AERIAL ELECTRIC
 - FORCE MAIN
 - TELEPHONE RISER (BOX)
 - UTILITY POLE
 - EXISTING SANITARY MANHOLE
 - FIRE HYDRANT VAL & D.P.
 - WATER VALVE
 - GRATED CATCH BASIN
 - CURB INLET CATCH BASIN

NOTES: Soil Preparation and Compaction

Remove all stumps, bushes, trees and weeds, roots, and other surface obstructions from the site. Contractor to strip all topsoil from the entire area to be graded. After the removal of all foreign organic matter, and after stripping of topsoil, the entire surface to be filled or areas that are cut to subgrade shall be compacted to a minimum depth of 12 inches, and then compacted by proof-rolling with suitable compaction equipment weighing not less than 4000 lbs based on the contact area of the row of feet or pneumatic-tired roller of equivalent compaction characteristics.

The maximum thickness of fill shall be in like not to exceed 8 inches. The proof-rolling and the compaction operations under the building and paved areas shall produce at least 90% of the maximum dry density as determined by the Standard Proctor (ASTM D 1557) using any soft areas encountered during proof-rolling shall be undercut and replaced with a qualified and technique to determine if the proper compaction is being placed. All fill used on the site shall consist of low plasticity soils as approved by the soils engineer. After proof-rolling, no water should be allowed to pond on the surface. The subwork for all building foundations and slabs shall be in accordance with architectural building plans and specifications. Compaction equipment shall be operating on the site at all times during filling operations.

- NOTES:**
- The Contractor is specifically cautioned that the location and/or elevation of existing utilities as shown on these plans is based on records of the various utility companies and, where possible, measurements taken in the field. The information is to be relied on as being exact or complete. The Contractor must call the appropriate utility company to request exact field location of utilities. It shall be the responsibility of the Contractor to relocate or remove existing utilities which conflict with the proposed improvements shown on plans.
 - North derived from bearing of record for the centerline of relocated Lake St. Louis Boulevard, Job No. J6P06728, Sheet 9, (530°-45'-20"R).
 - This site is zoned "C3" Community Business District, as per City Engineer. Setback Requirements:
50 Feet - Minimum right-of-way setback
45 Feet - Rear yard setbacks
10 Feet - Side yard setbacks
 - This site is "Zone X" Areas determined to be outside 500-year flood plain, as per First Flood Insurance Risk Map for St. Charles County, Missouri and Incorporated Areas, Flood 220 of 525, Map No. 281830222 E, Map Revised August 2, 1998.
 - Field data obtained June, 1998 by M.H.F. and H.S.M.
 - Benchmark information as per Grading Plan for Old Lake St. Louis Boulevard by Statyak & Farnsworth, Inc. dated November, 1984, Job No. 8300, U.S.G.S. Datum, Square on top of wing wall - R.E. corner of Bridge - East bound lane of Highway 40-61 over Parapua Creek, Elevation = 513.14'
 - All trenches under paved areas shall be backfilled with granular material and compacted to meet compaction requirements for the parking lot.
 - All unexcavated areas are to receive twelve inches of topsoil. Contractor to seed, mulch, fertilize, and maintain all areas outside of paved areas that were disturbed during construction until an acceptable stand of grass is established. The contractor shall be responsible to take whatever means necessary to establish permanent soil stabilization.
 - Contractor shall refer to architectural plans for exact locations and dimensions of walkways, sloped paving, set porches, ramps, truck docks, precise building dimensions, exact building utility entrance locations, and exact number and location of downspouts.
 - All survey monuments disturbed during construction shall be replaced by a licensed land surveyor licensed in the state in which this project is located at the contractor's expense.
 - The subwork for all building foundations and slabs shall be in accordance with architect's plans and specifications.
 - Pavement shall be placed perpendicular to the finished contour in parking lot.
 - The Contractor is responsible for keeping storm water run-off and erosion under control during construction. Contractor shall comply with all state and local ordinances that apply to erosion control.
 - Contractor to obtain and follow installation requirements for storm sewer from pipe manufacturer for each type of piping material.
 - Contractor shall coordinate adjustments to existing utilities with appropriate utility company as work progresses.
 - All pipe lengths and slope data have been provided for convenience only. Contractor to verify all lengths and grades.
 - All underground electric and telephone wires that lie beneath paved areas shall be installed in conduit. Contractor shall coordinate with each utility service provider for size and type of conduit required.
 - Contractor shall coordinate with electric company to determine size of transformer pad required and design specifications.
 - Subsoil coordinates will be provided by Buescher Frankenberg Associates, Inc. for contractor's convenience upon request.
 - All excavation of any kind shall be included as part of the utility work. No additional compensation will be allowed for solid rock removal. It has been received by governing authorities.
 - All existing structures, fencing, trees, and etc. within construction area shall be removed and disposed of off site. Any burning on site shall be subject to local ordinances.
 - All earthwork and excavations shall be in accordance with "Geotechnical Investigation - Precast Supermarket and Retail Development - Lake St. Louis, Missouri", as prepared by Midwest Testing, Inc. dated July 24, 1998.

DANIEL E. MASCHMANN
Professional Engineer
No. 17205
Date: 7/24/02

Daniel E. Maschmann, P.E. #17205
Registered Professional Engineer
State of Missouri
for Buescher Frankenberg Associates, Inc.

PRELIMINARY DRAWING
AUG 26 2002
FOR REVIEW PURPOSES ONLY
NOT TO BE USED FOR CONSTRUCTION

**STORM SEWER PLAN AND PROFILE
SHOPPES AT LAKE ST. LOUIS**

FOR SCHRUCK MARKETS INC.
LAKE ST. LOUIS, ST. CHARLES CO., MISSOURI

**BUESCHER FRANKENBERG
ASSOCIATES, INC.**

1030 ELM STREET WASHINGTON, MISSOURI 63090
K.W.F., R.K.S. JUNE, 2001 65-2364
HORIZ. 1"=50'
VERT. 1"=5'
12 OF 17

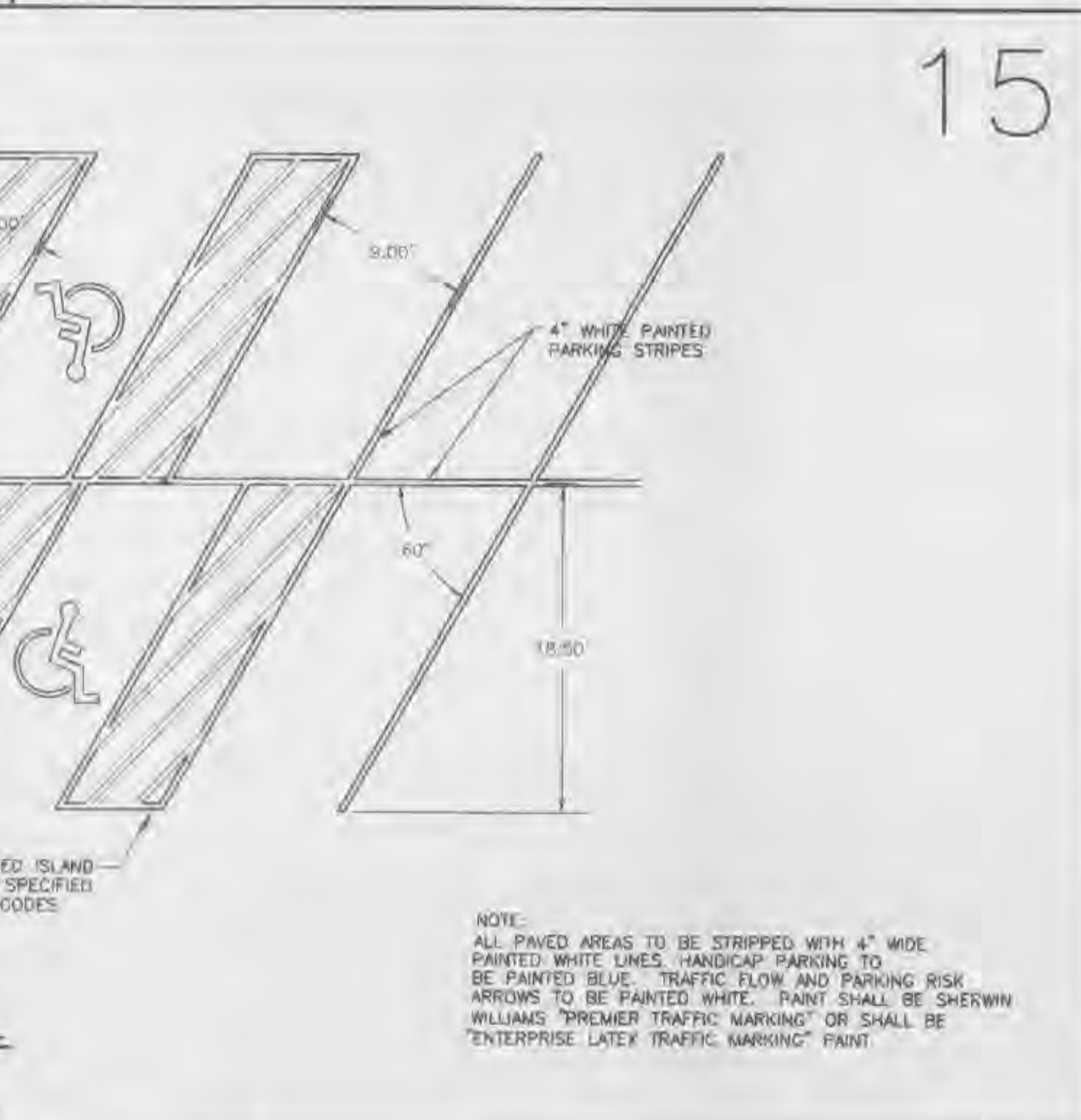
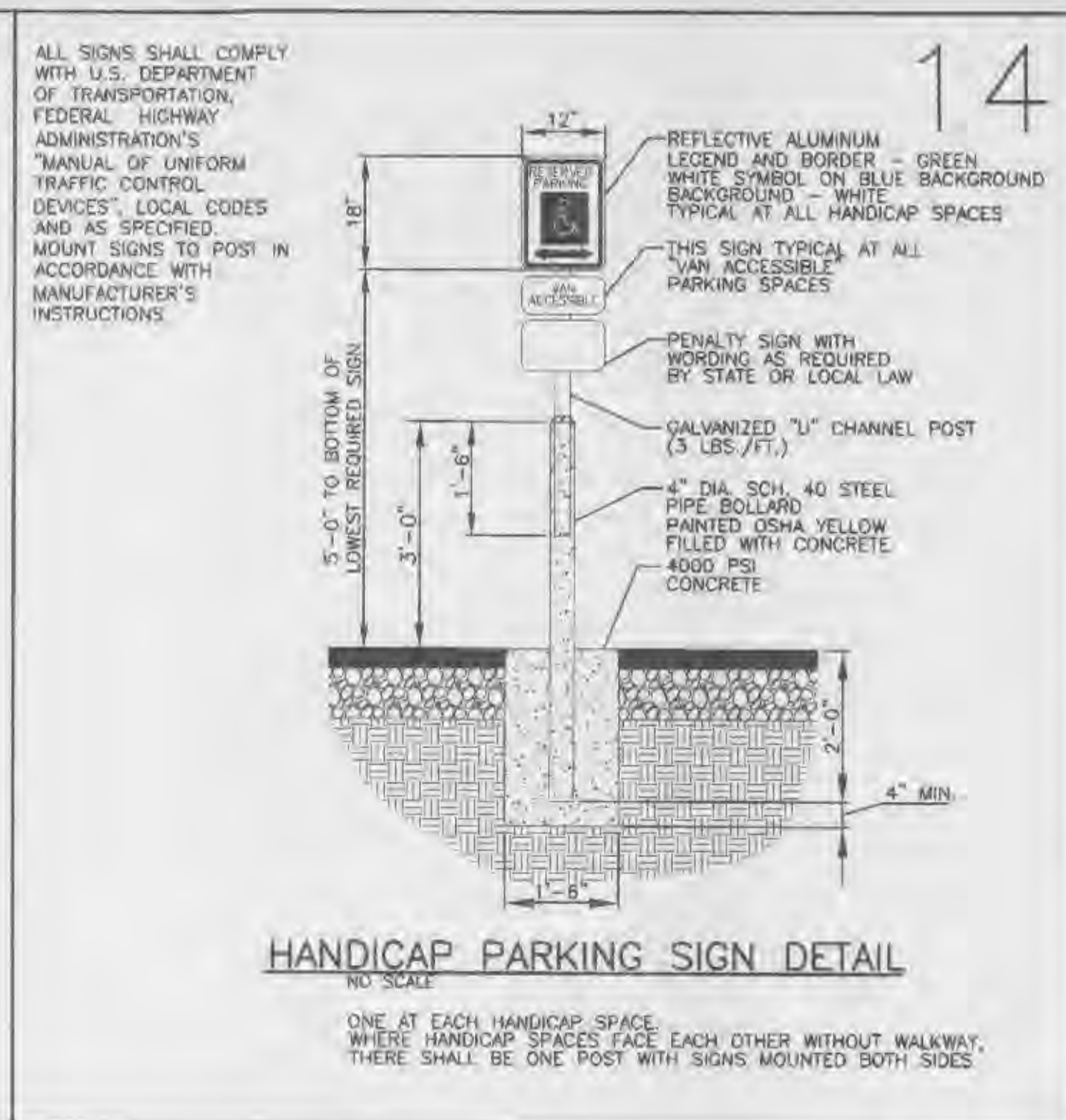
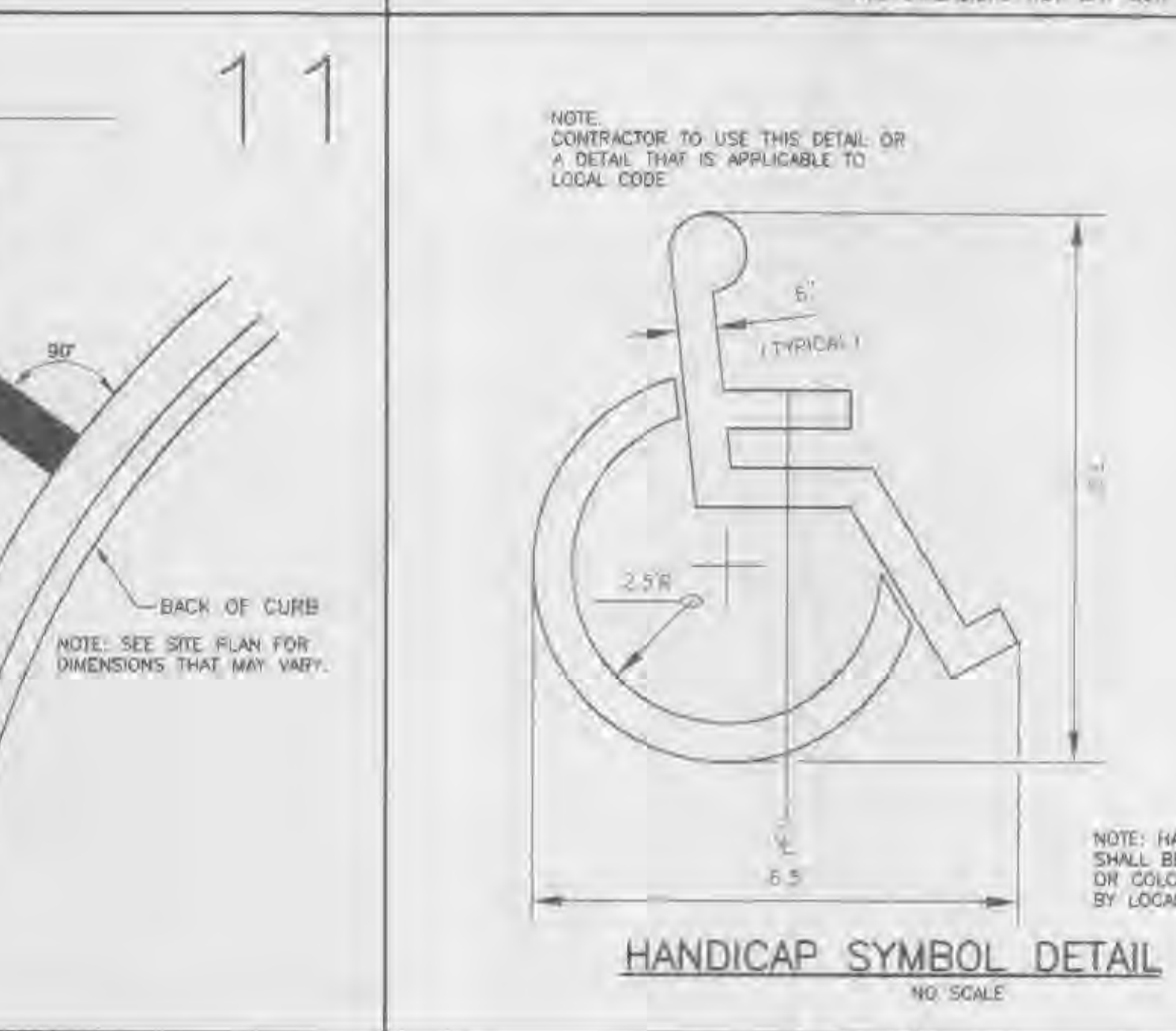
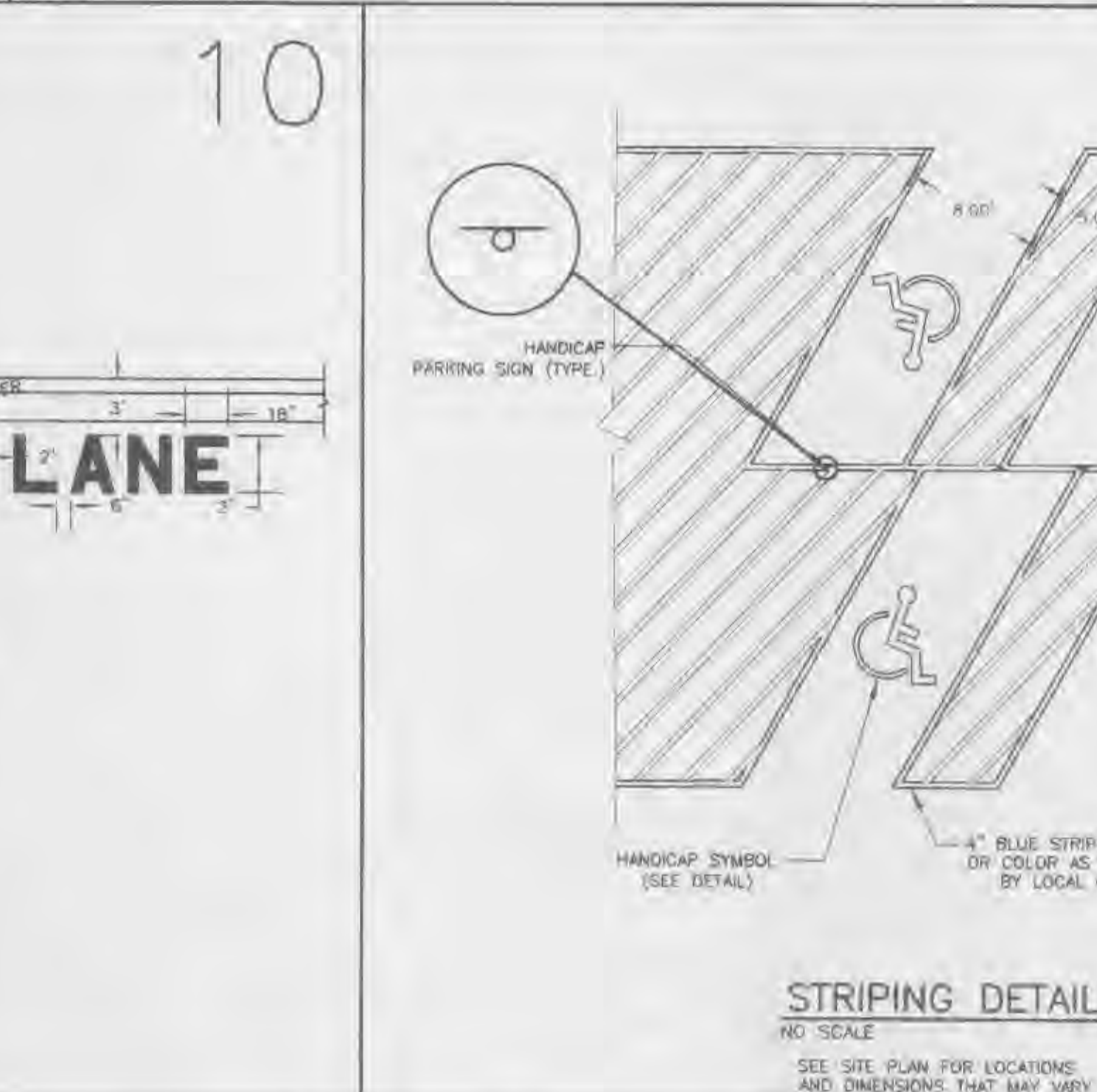
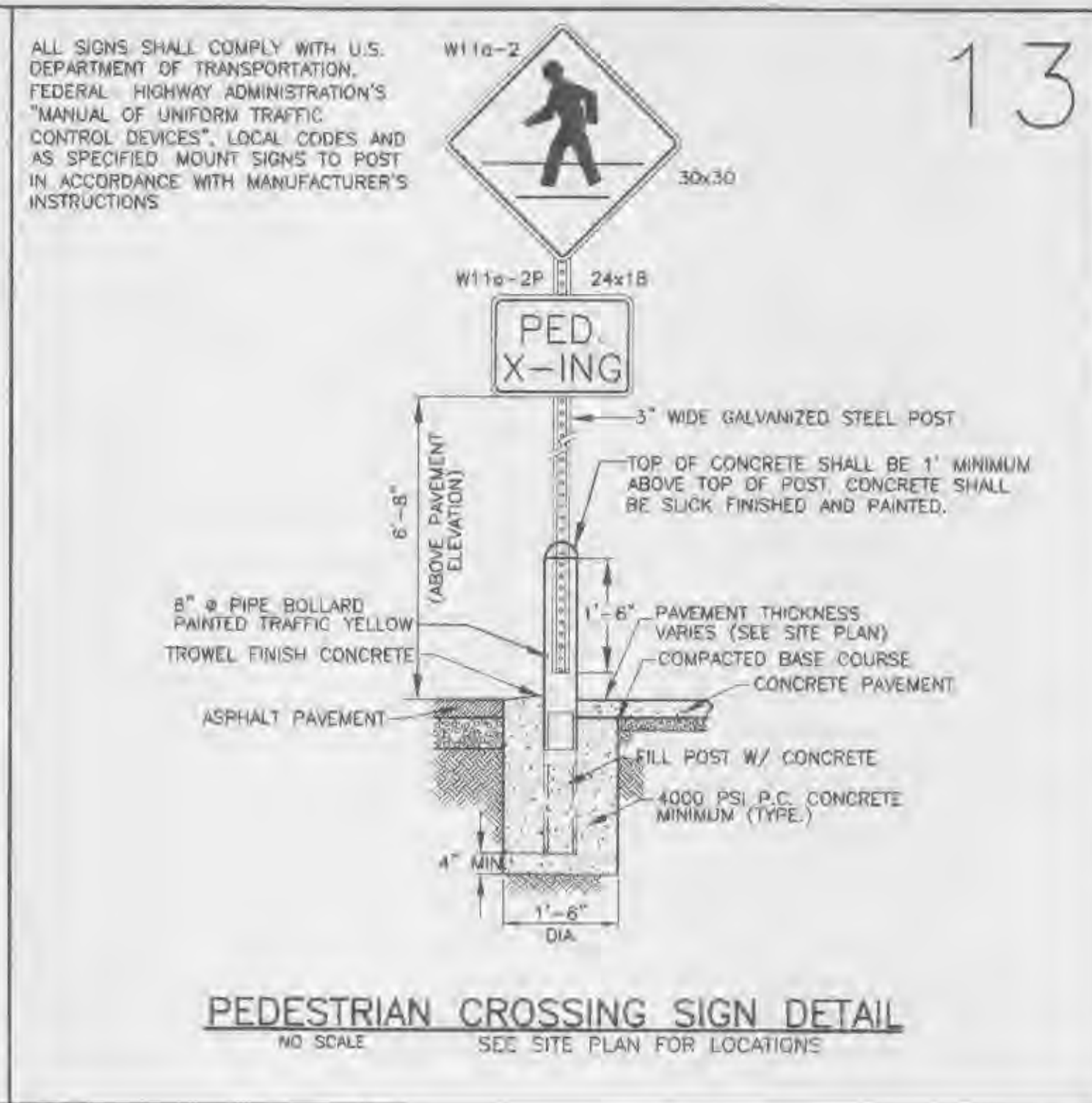
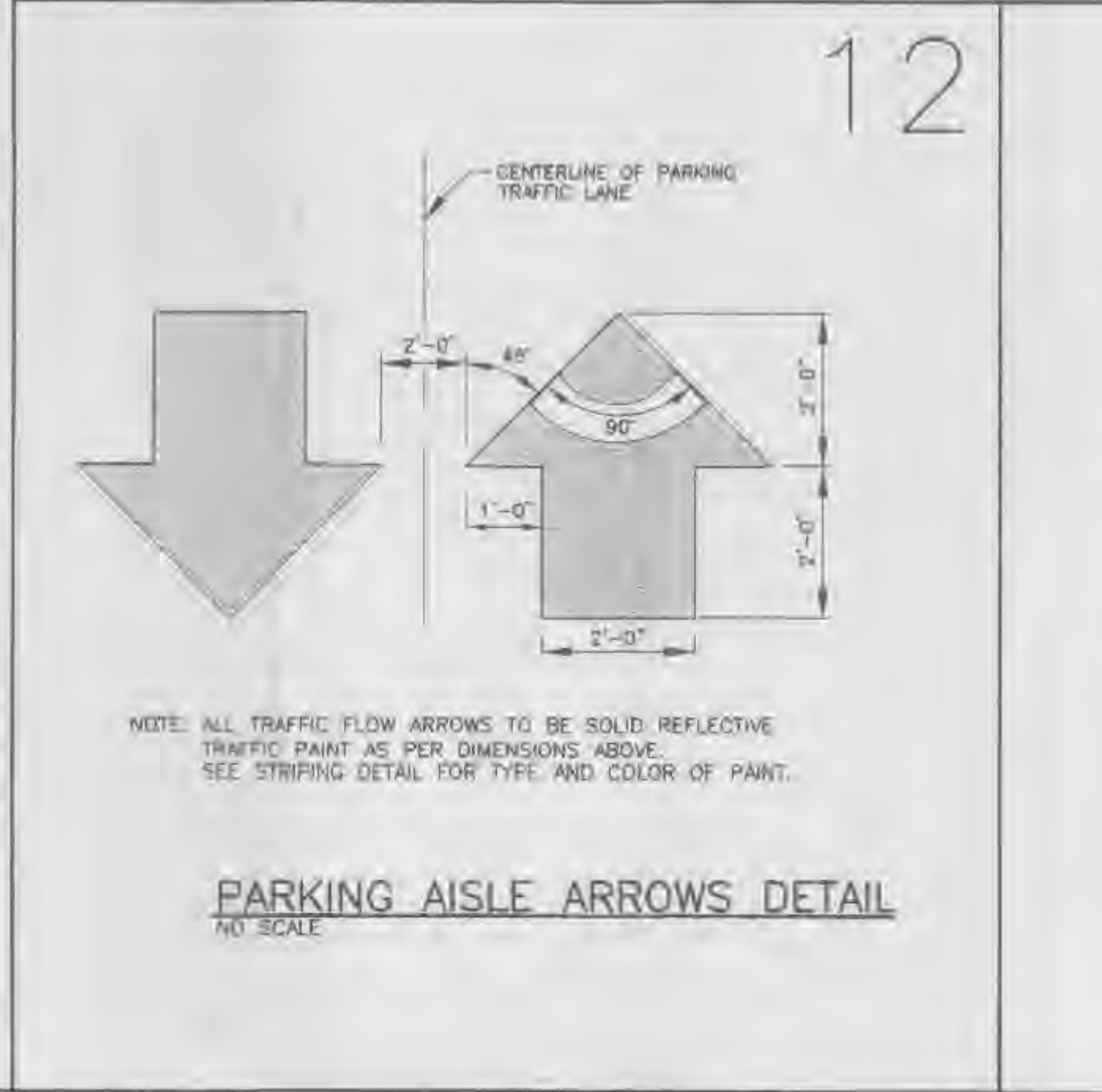
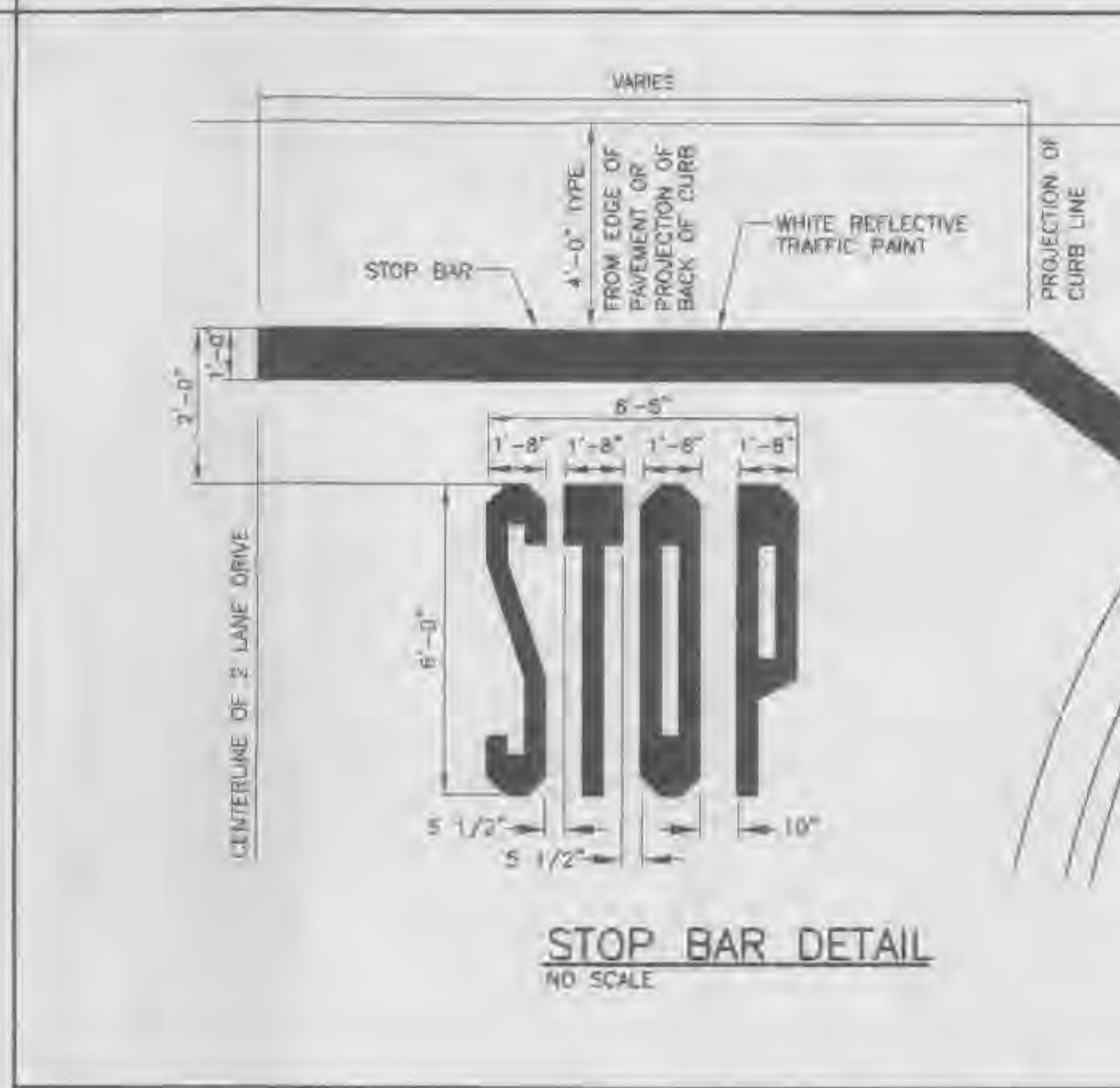
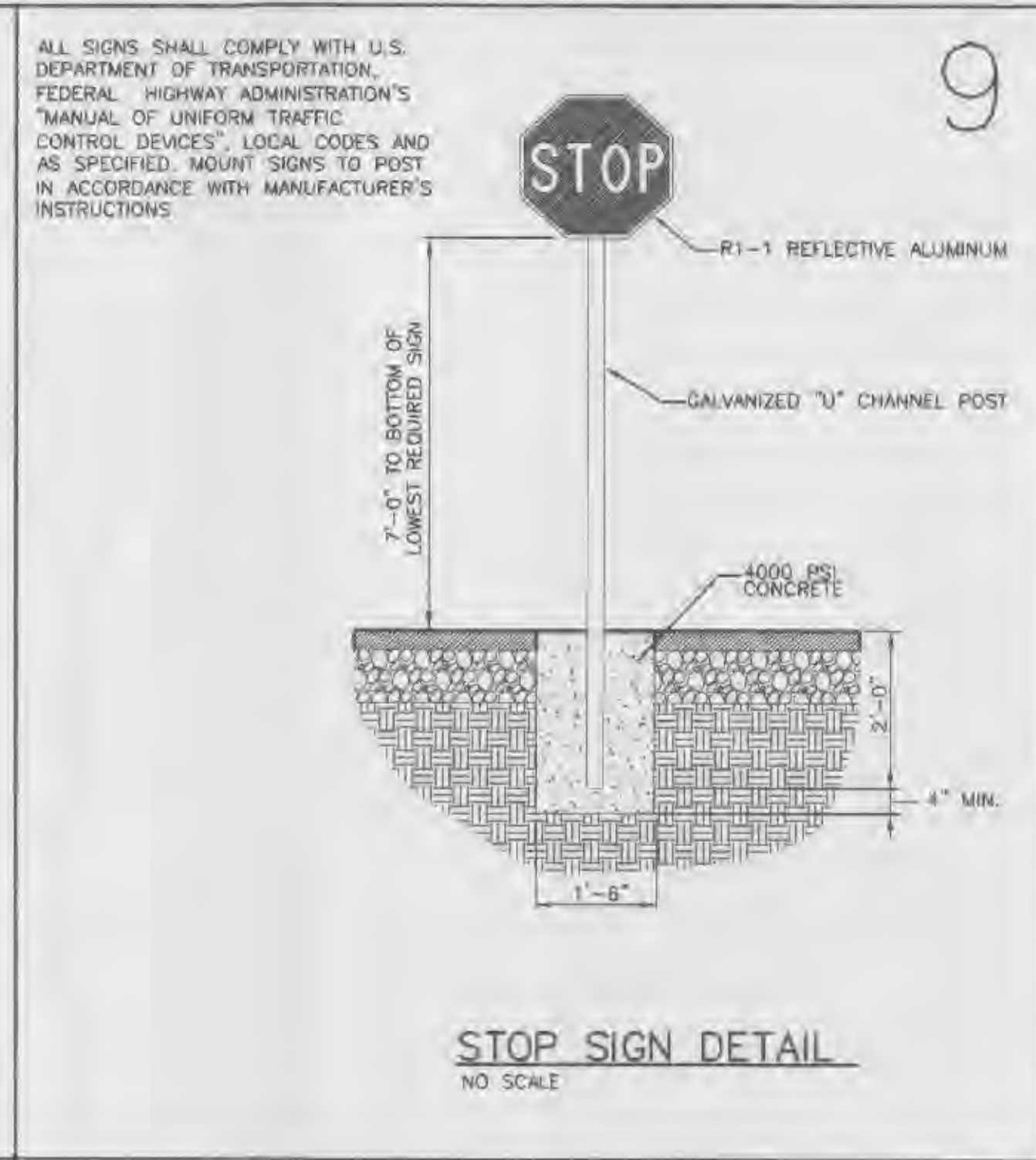
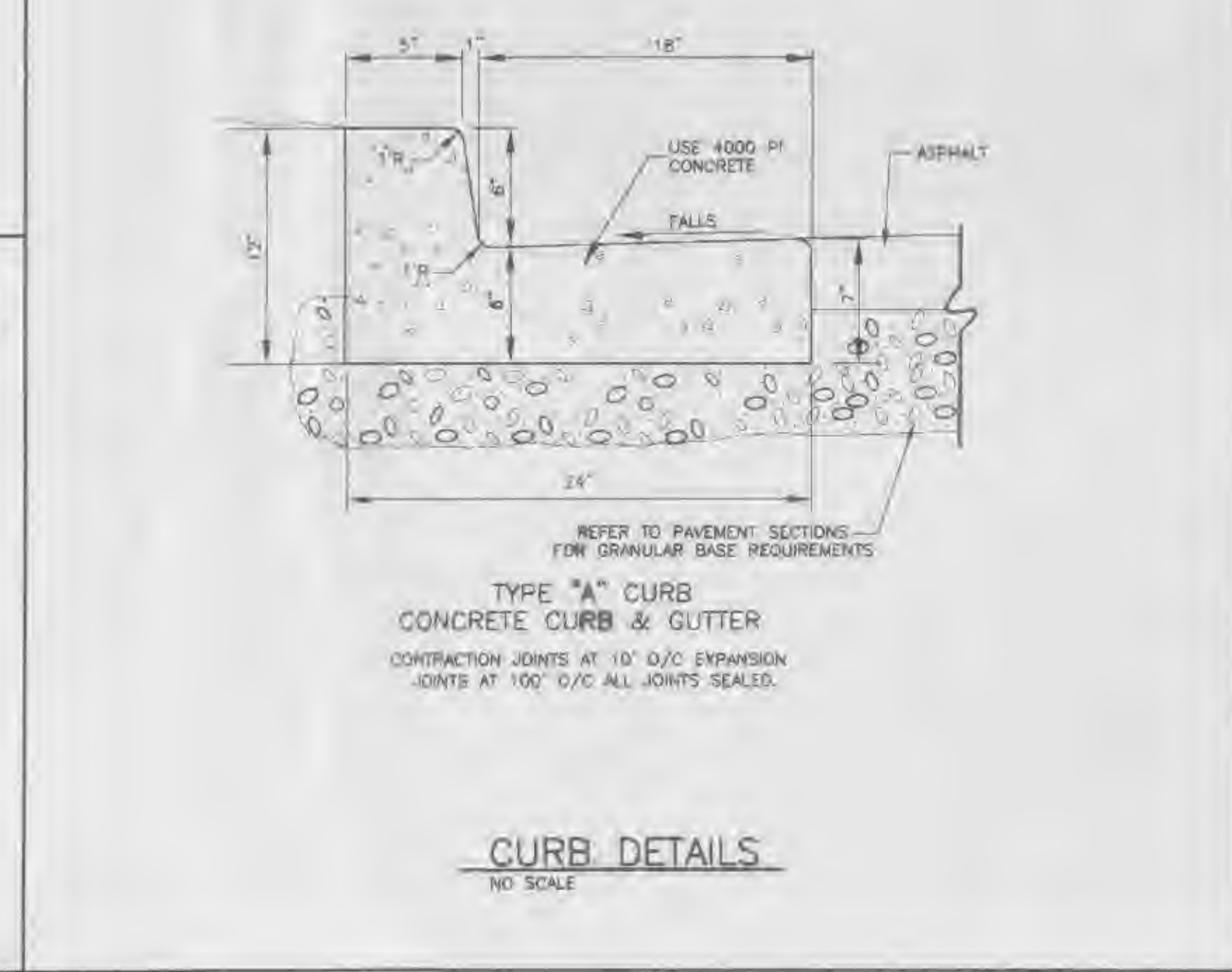
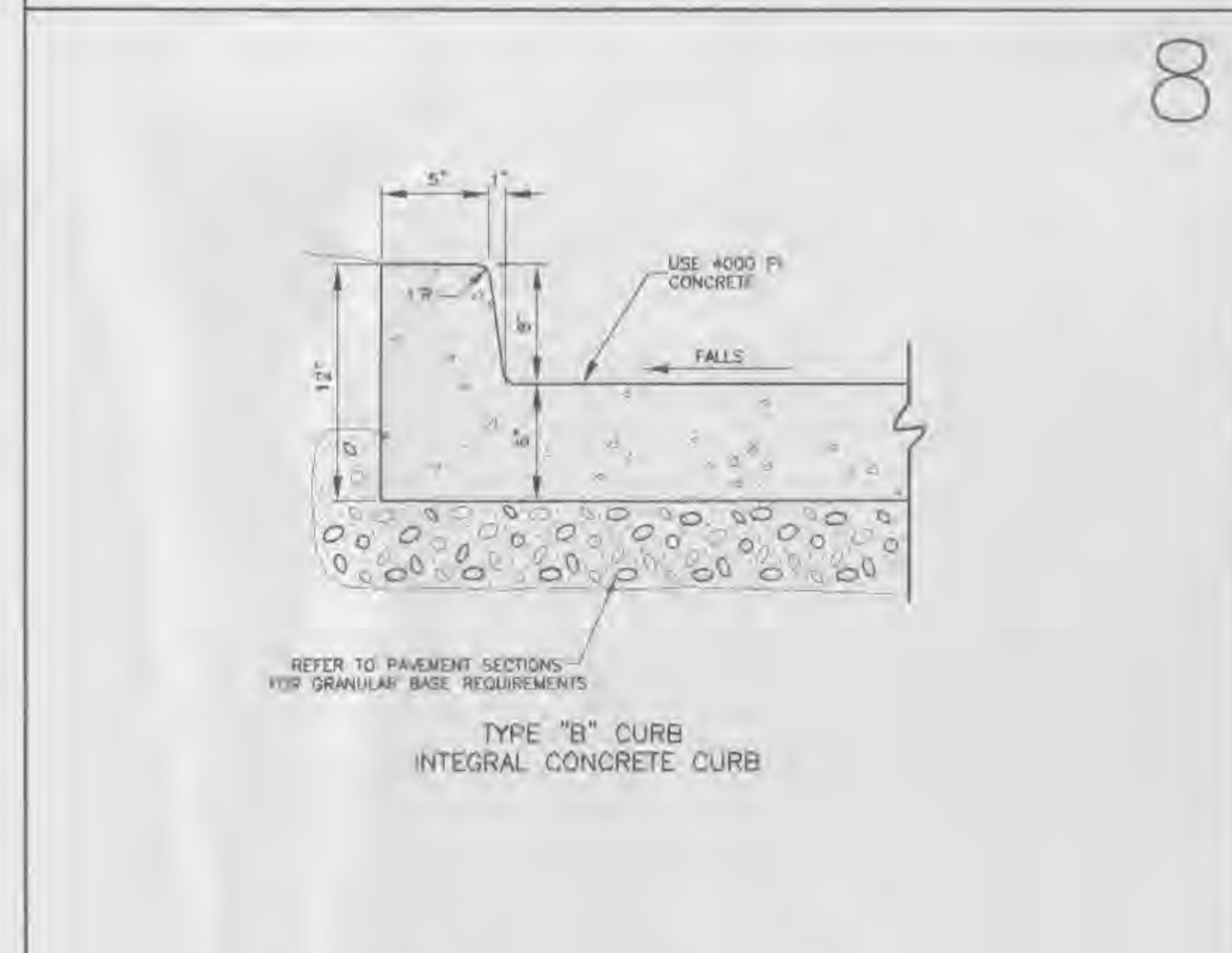
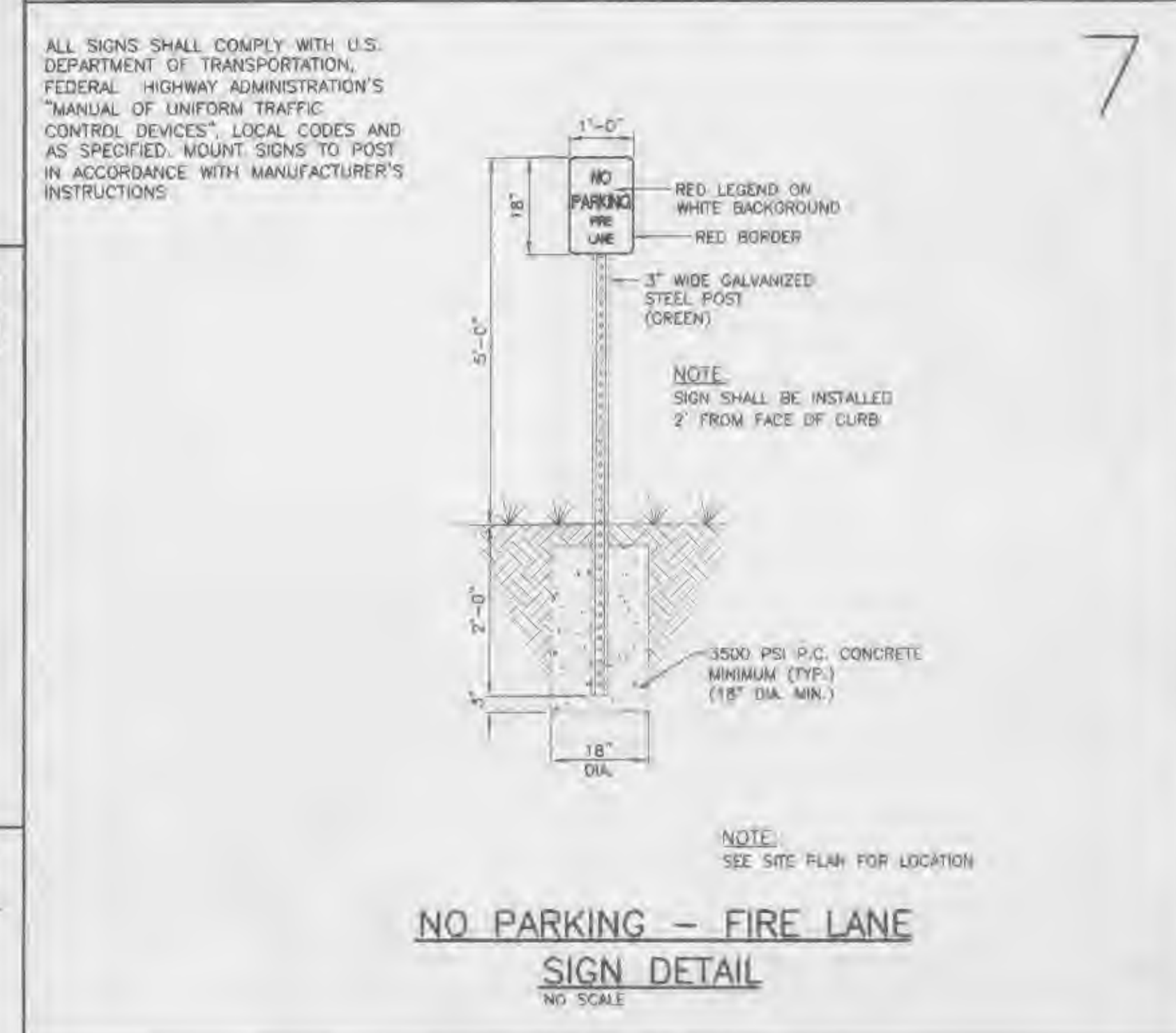
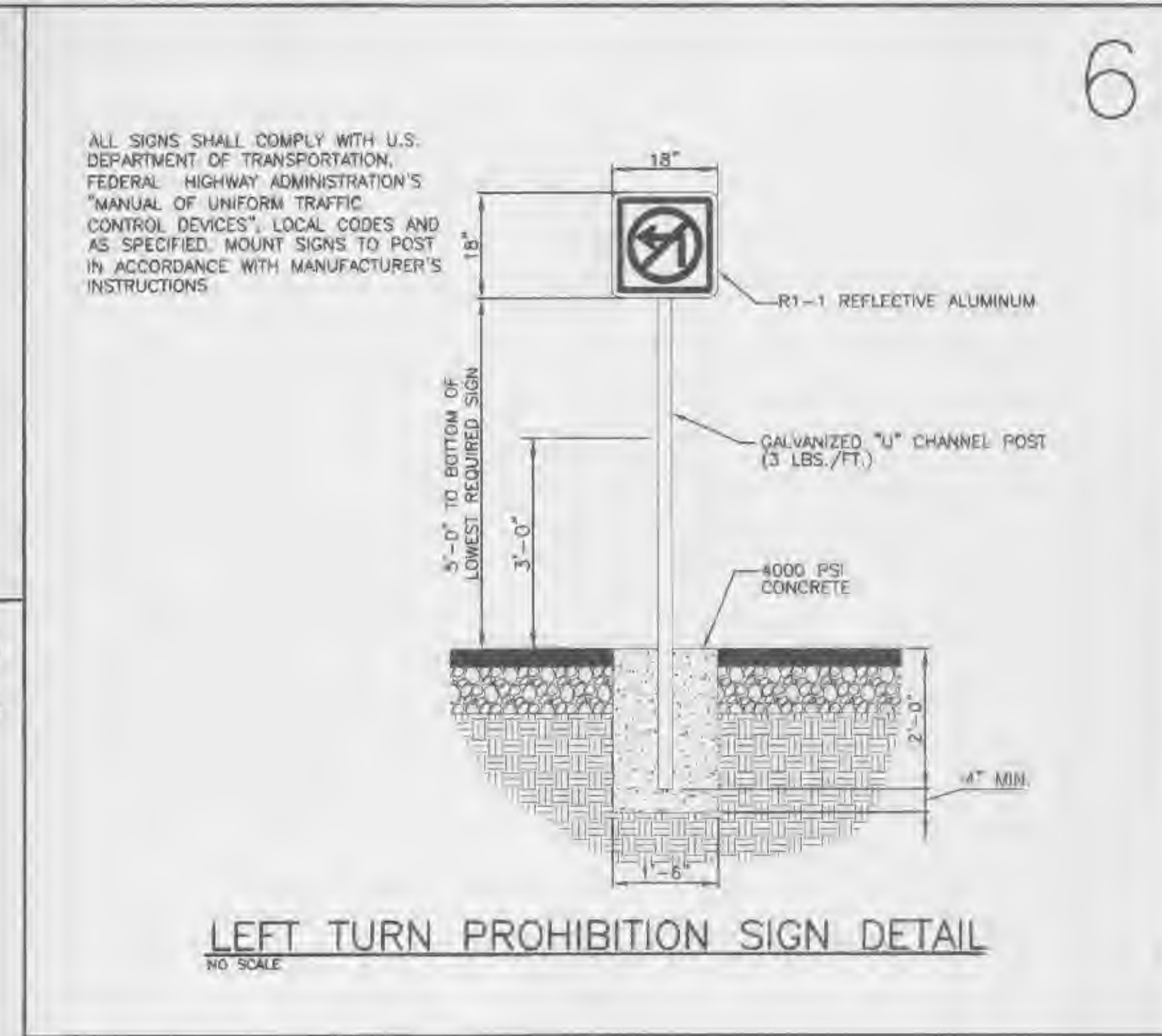
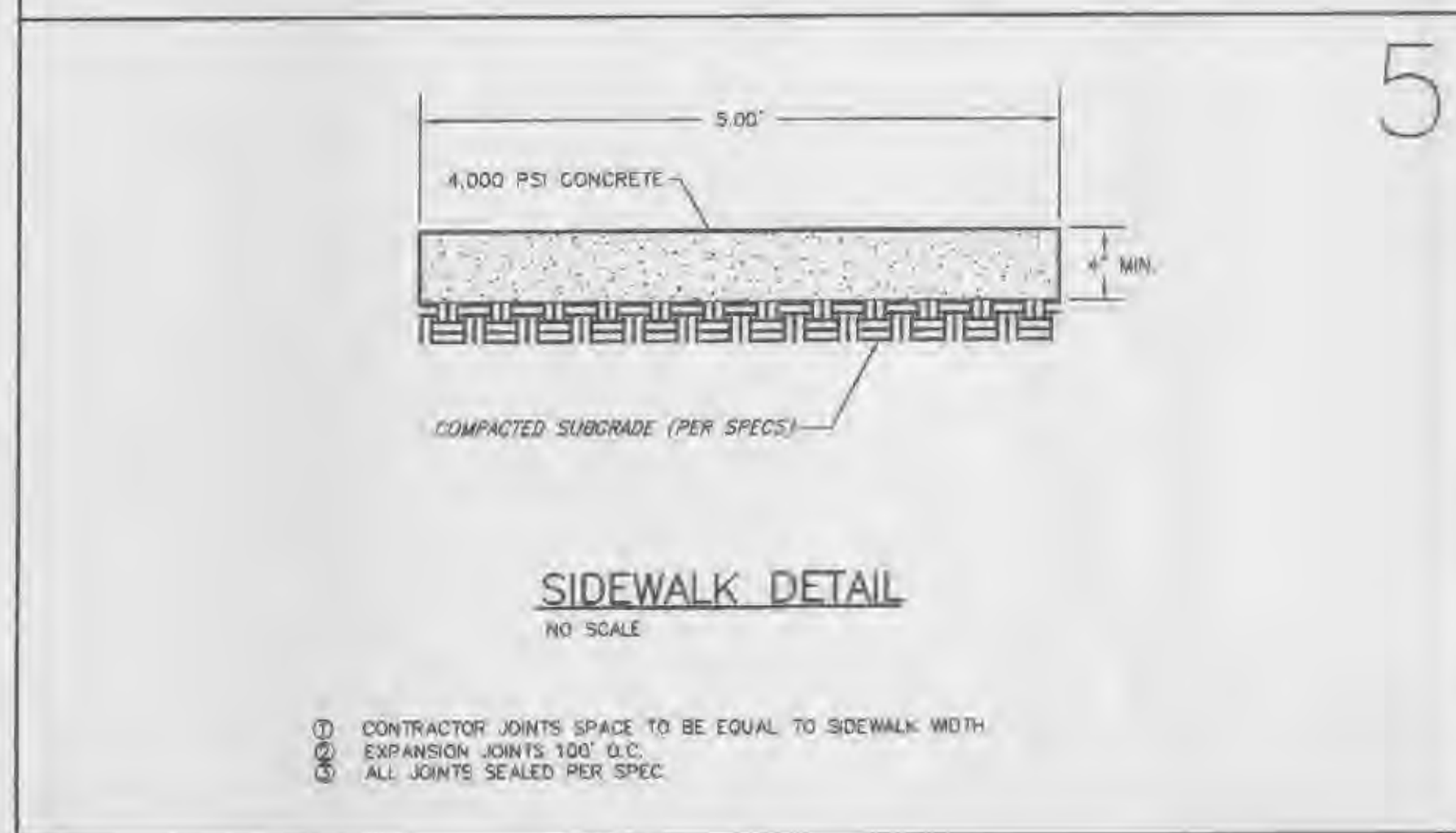
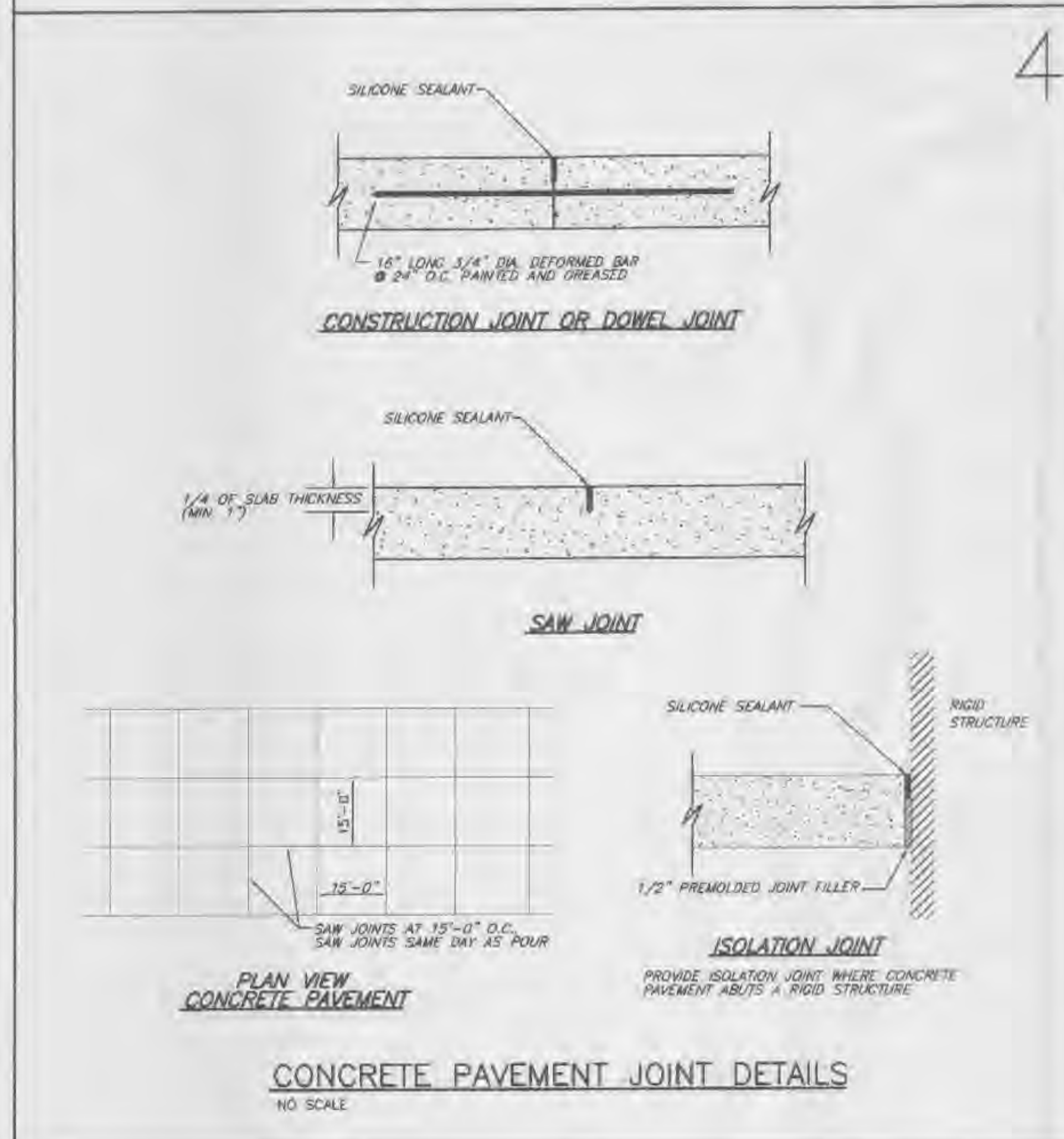
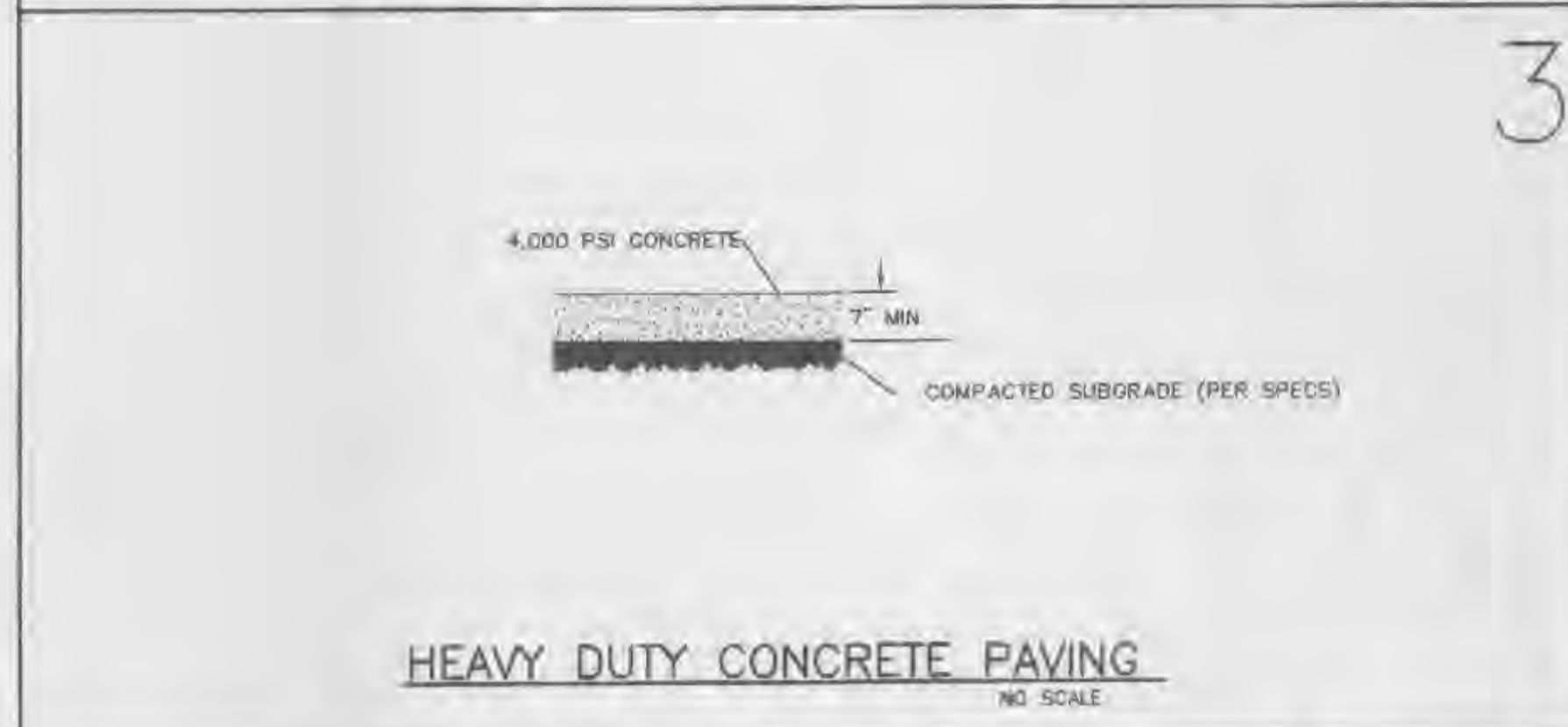
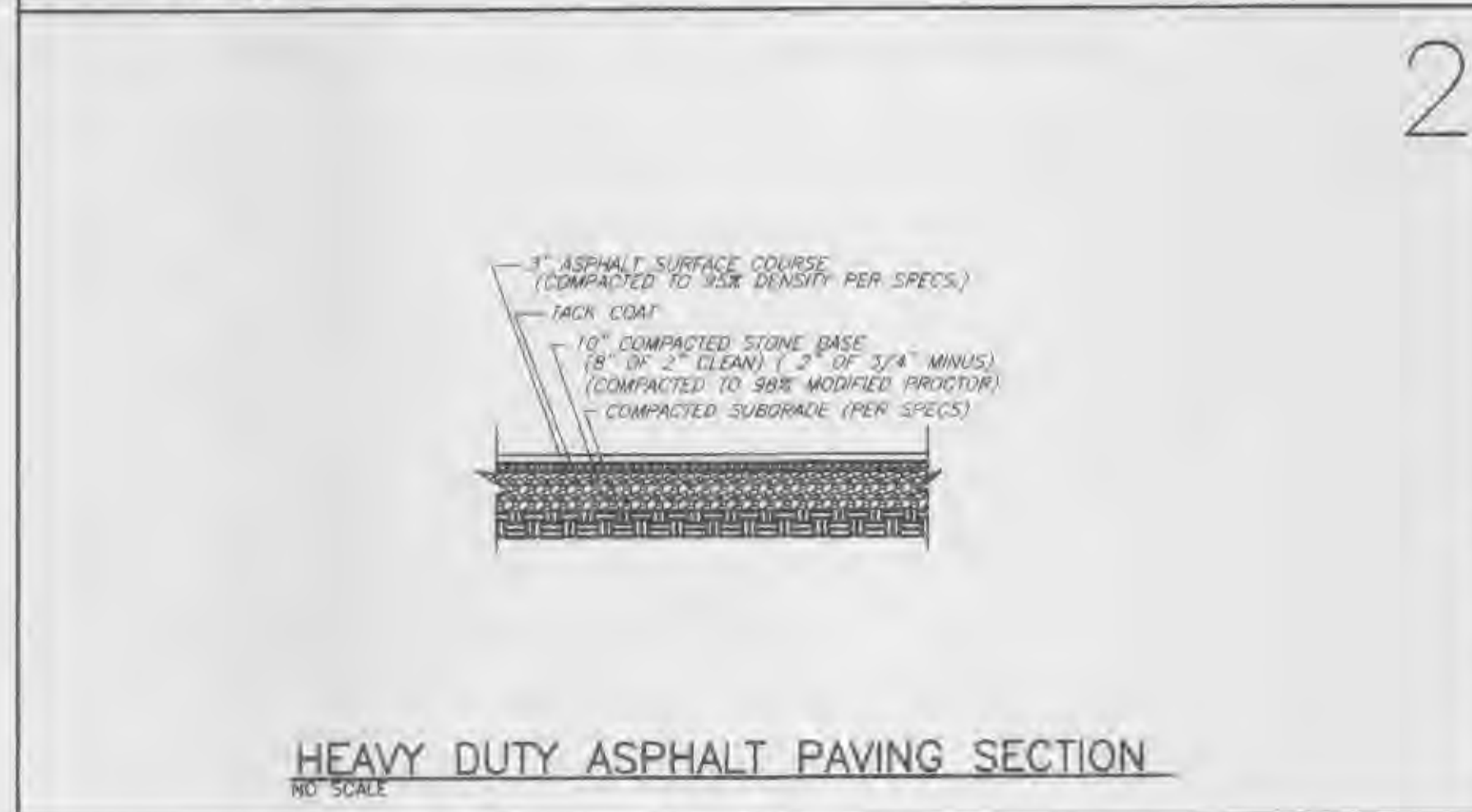
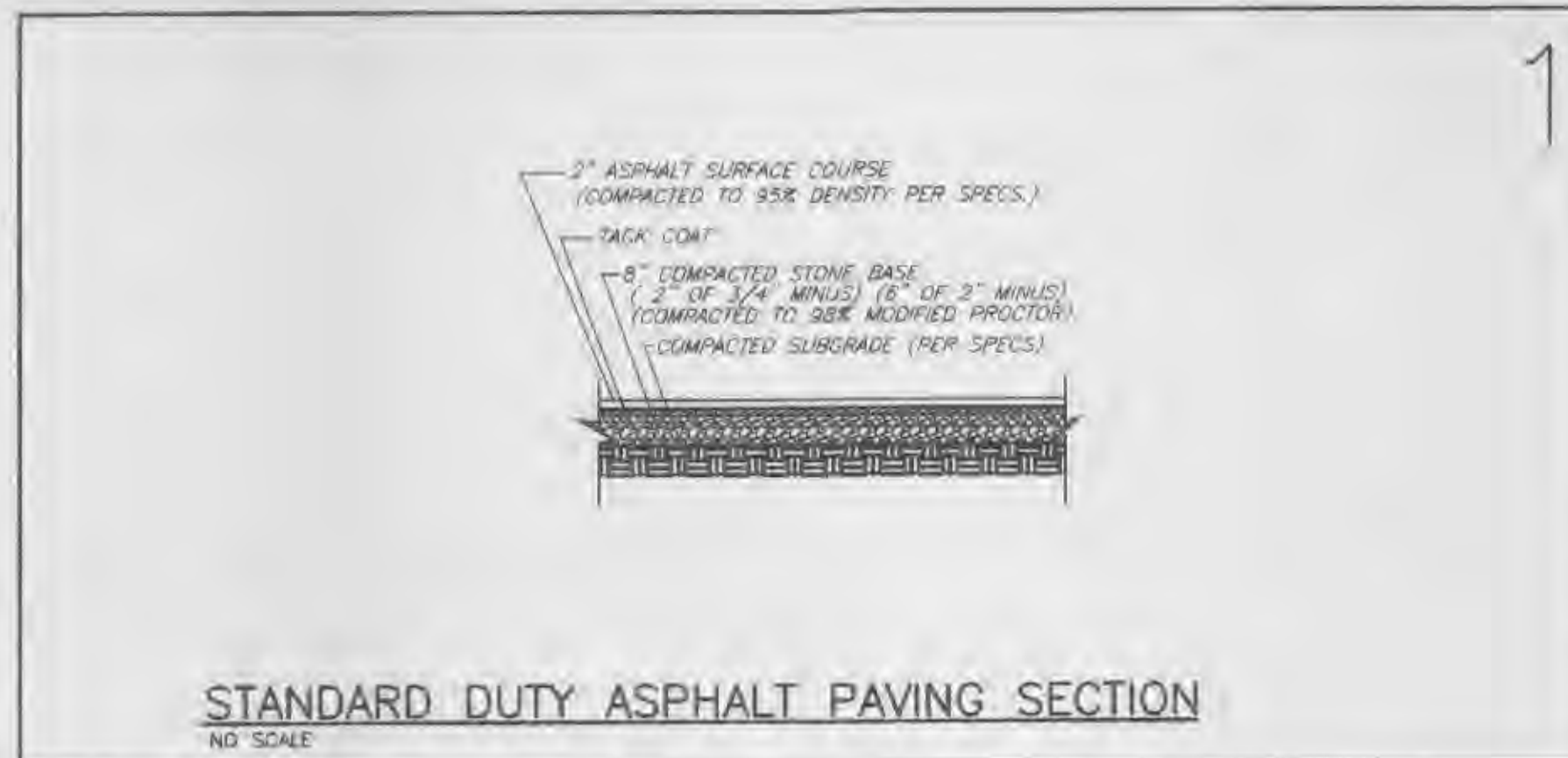
Schnucks
83,254 SQ. FT.
FLOOR ELEV. 581.50

**NATURALIZED AND
DETENTION AREA
(PART OF LOT 1)**

LOT 4

HIGHWAY 40-61
WIDTH 40'-0"

CONTRACTOR TO VERIFY LOCATION AND ELEVATION OF EXISTING WATER LINE AND EXISTING FORCE MAIN PRIOR TO PERFORMING ANY WORK ON THIS SECTION OF STORM SEWER.



DANIEL E. MASCHMANN
REGISTERED PROFESSIONAL ENGINEER
STATE OF MISSOURI
E-17208
Date: 7/2/02

Daniel E. Maschmann, P.E. #17208
Registered Professional Engineer
State of Missouri
for Buescher Frankenberg Associates, Inc.

SHEET INDEX	
DETAIL 1	STANDARD DUTY ASPHALT PAVING SECTION DETAIL
DETAIL 2	HEAVY DUTY ASPHALT PAVING SECTION DETAIL
DETAIL 3	HEAVY DUTY CONCRETE PAVING DETAIL
DETAIL 4	CONCRETE PAVING JOINT DETAILS
DETAIL 5	SIDEWALK DETAIL
DETAIL 6	LEFT TURN PROHIBITION SIGN DETAIL
DETAIL 7	NO PARKING - FIRE LANE SIGN DETAIL
DETAIL 8	CURB DETAILS
DETAIL 9	STOP SIGN DETAIL
DETAIL 10	FIRE LANE PAINTING DETAIL
DETAIL 11	STOP BAR DETAIL
DETAIL 12	PARKING AISLE ARROWS DETAIL
DETAIL 13	PEDESTRIAN CROSSING DETAIL
DETAIL 14	HANDICAP PARKING SIGN DETAIL
DETAIL 15	STRIPING DETAIL
DETAIL 16	HANDICAP SYMBOL DETAIL
DETAIL 17	TRAFFIC FLOW ARROW DETAIL

PRELIMINARY DRAWING
AUG 26 2002
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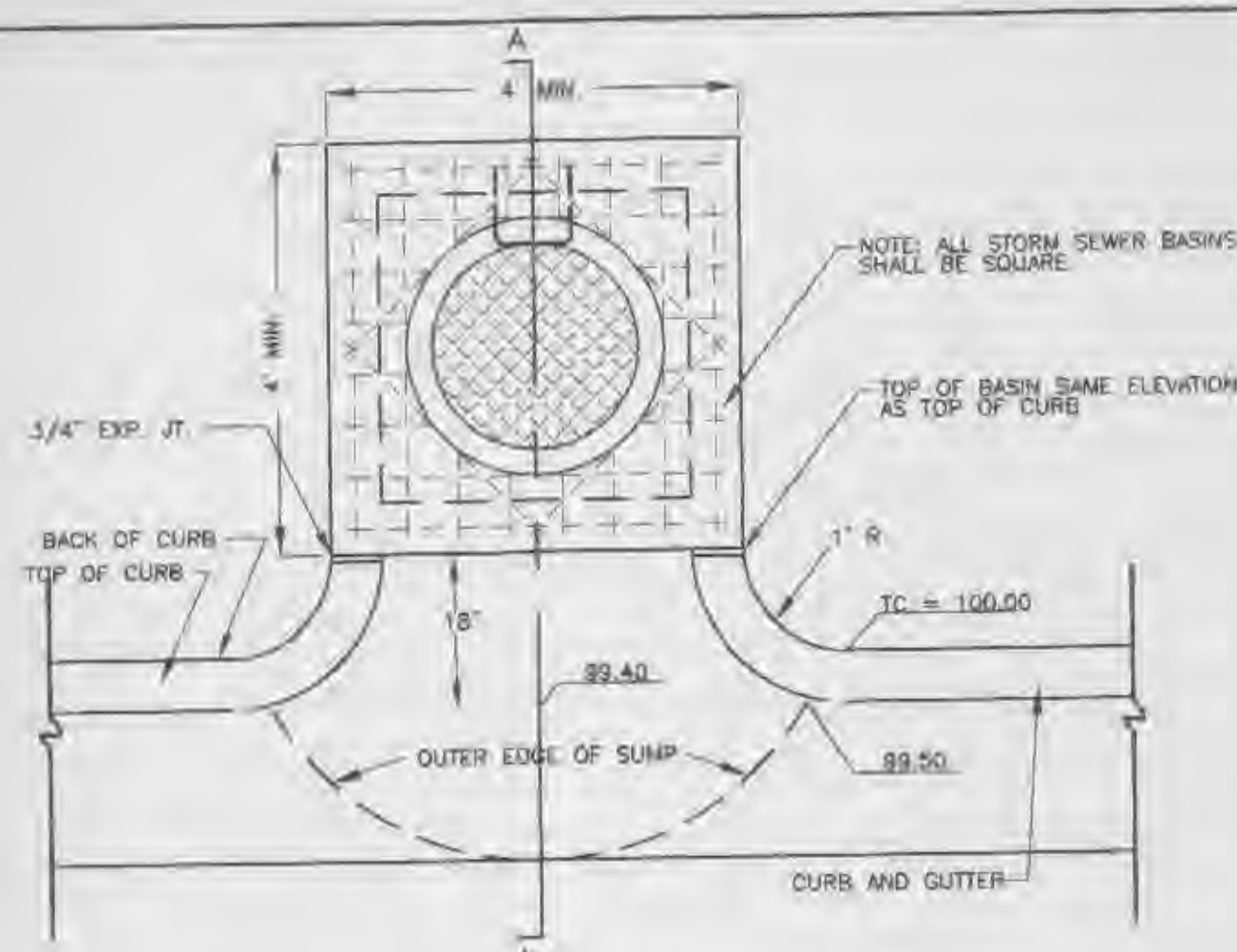
DETAIL SHEET
SHOPPES AT LAKE ST. LOUIS
FOR SEBNUCK MARKETS INC.
LAKE ST. LOUIS, ST. CHARLES CO., MISSOURI

BUESCHER FRANKENBERG ASSOCIATES, INC.
1036 ELM STREET WASHINGTON, MISSOURI 63090

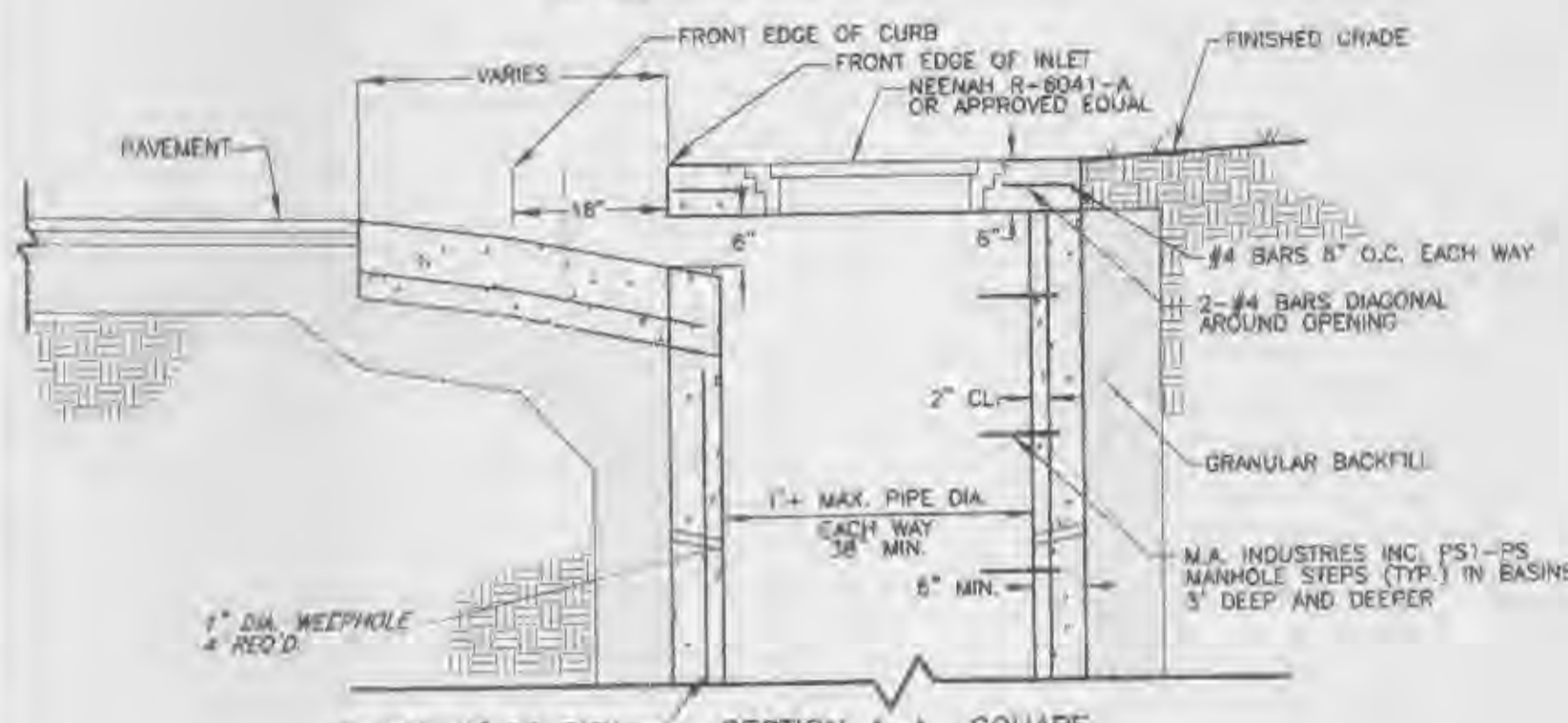
DATE: D.A.R., R.A.S.	DATE: JUNE, 2002	PROJ. NO: 98-2394
SCALE:	AS SHOWN	SHEET NO: 13 OF 17

1 CONTRACTOR JOINTS SPACE TO BE EQUAL TO SIDEWALK WIDTH.
2 EXPANSION JOINTS 100' O.C.
3 ALL JOINTS SEALED PER SPEC.

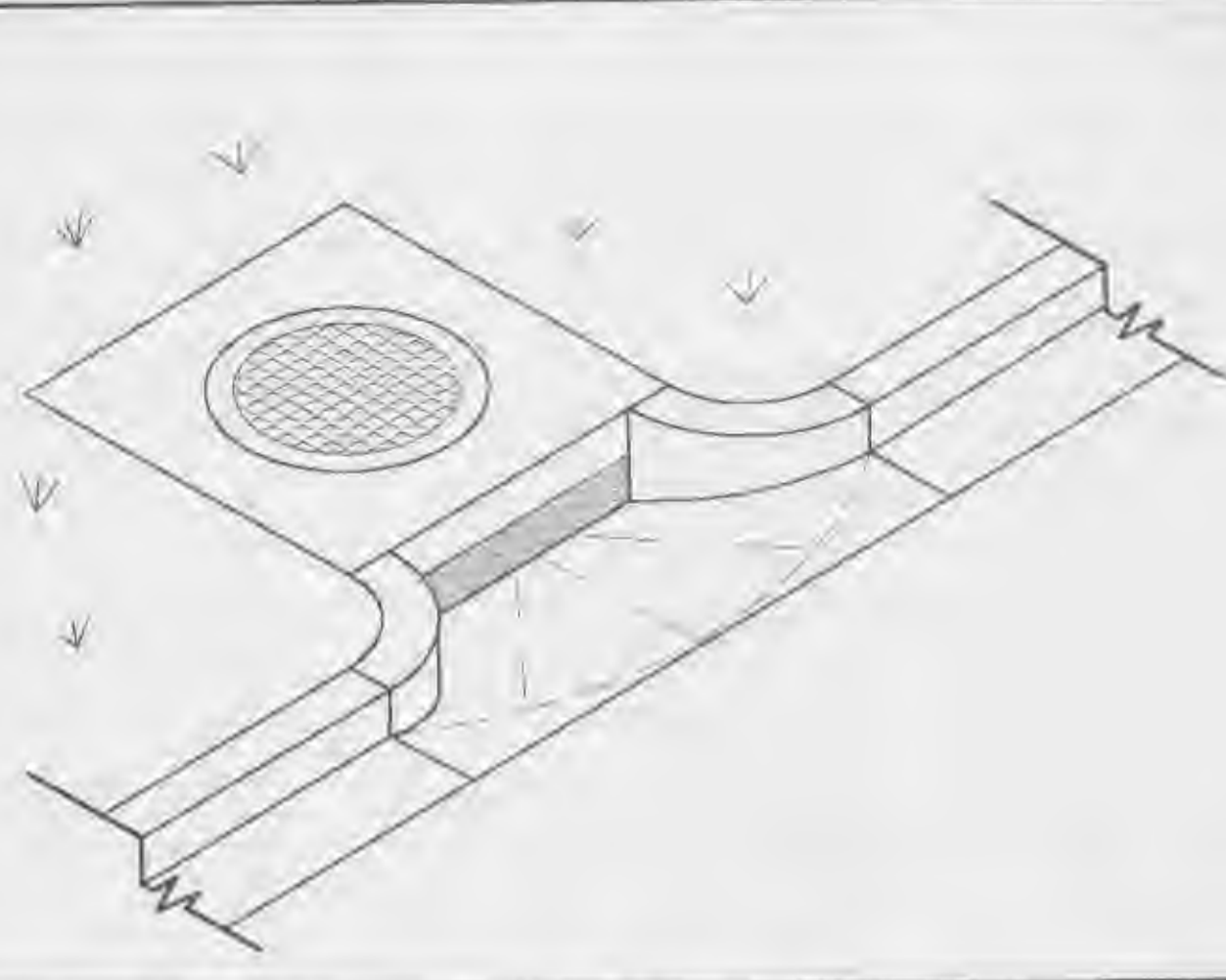
Two working days prior to the start of any excavation on this site, contractor shall call 1-800-DIG-RITE for utility location information.
All OSHA rules & regulations established for the type of construction required by these plans shall be strictly followed (i.e., Trenching, Blasting, etc.)



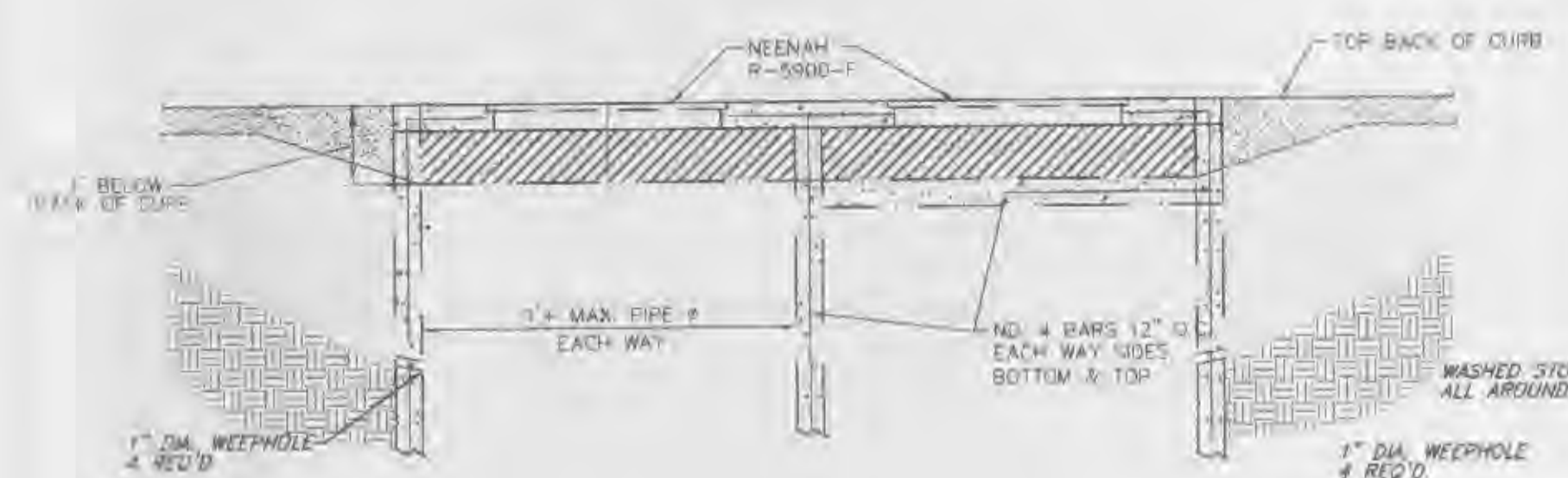
PLAN OF GUTTER SUMP
NO SCALE



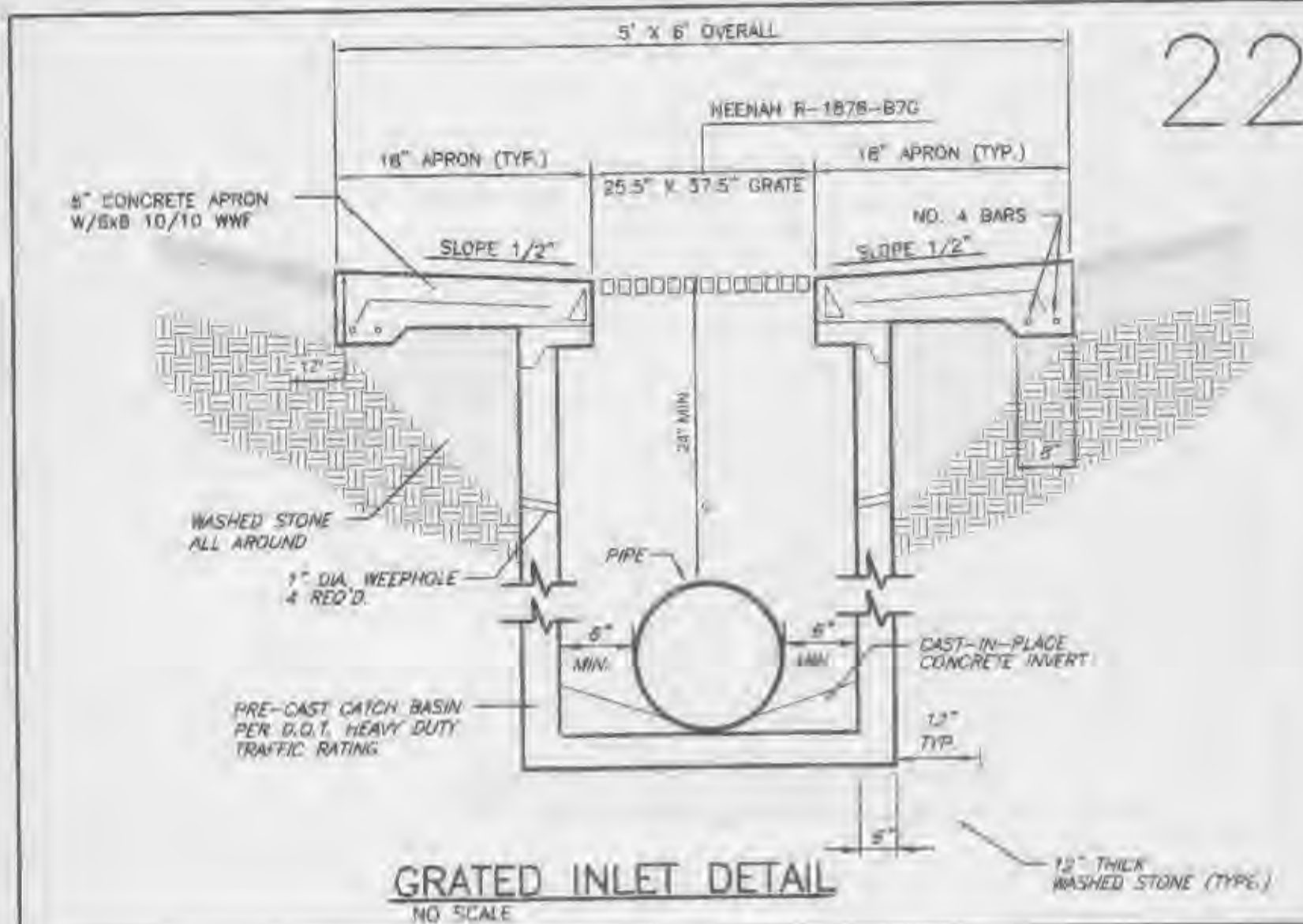
SECTION A-A SQUARE
CATCH BASIN DETAIL
NO SCALE



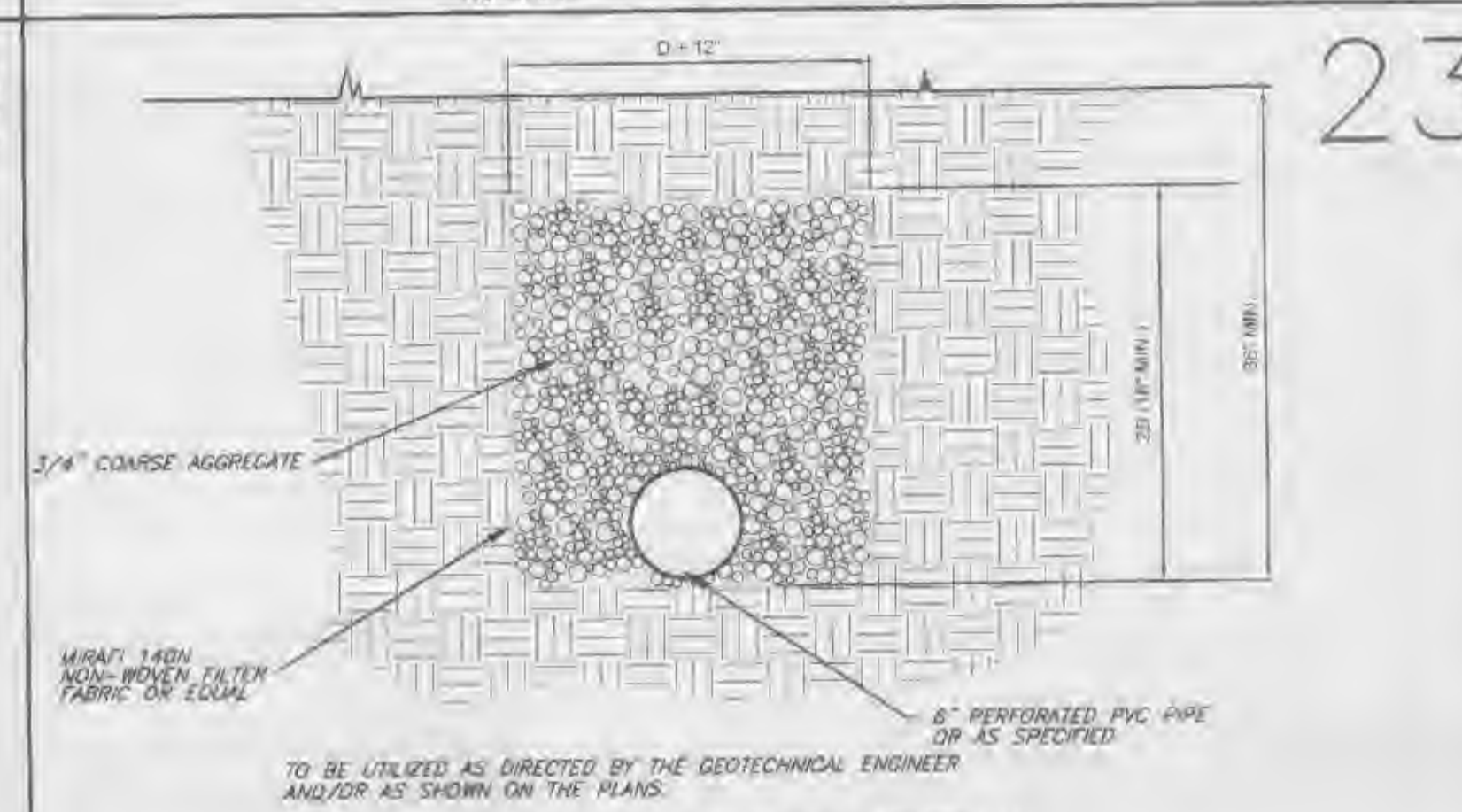
PLAN OF GUTTER SUMP
NO SCALE



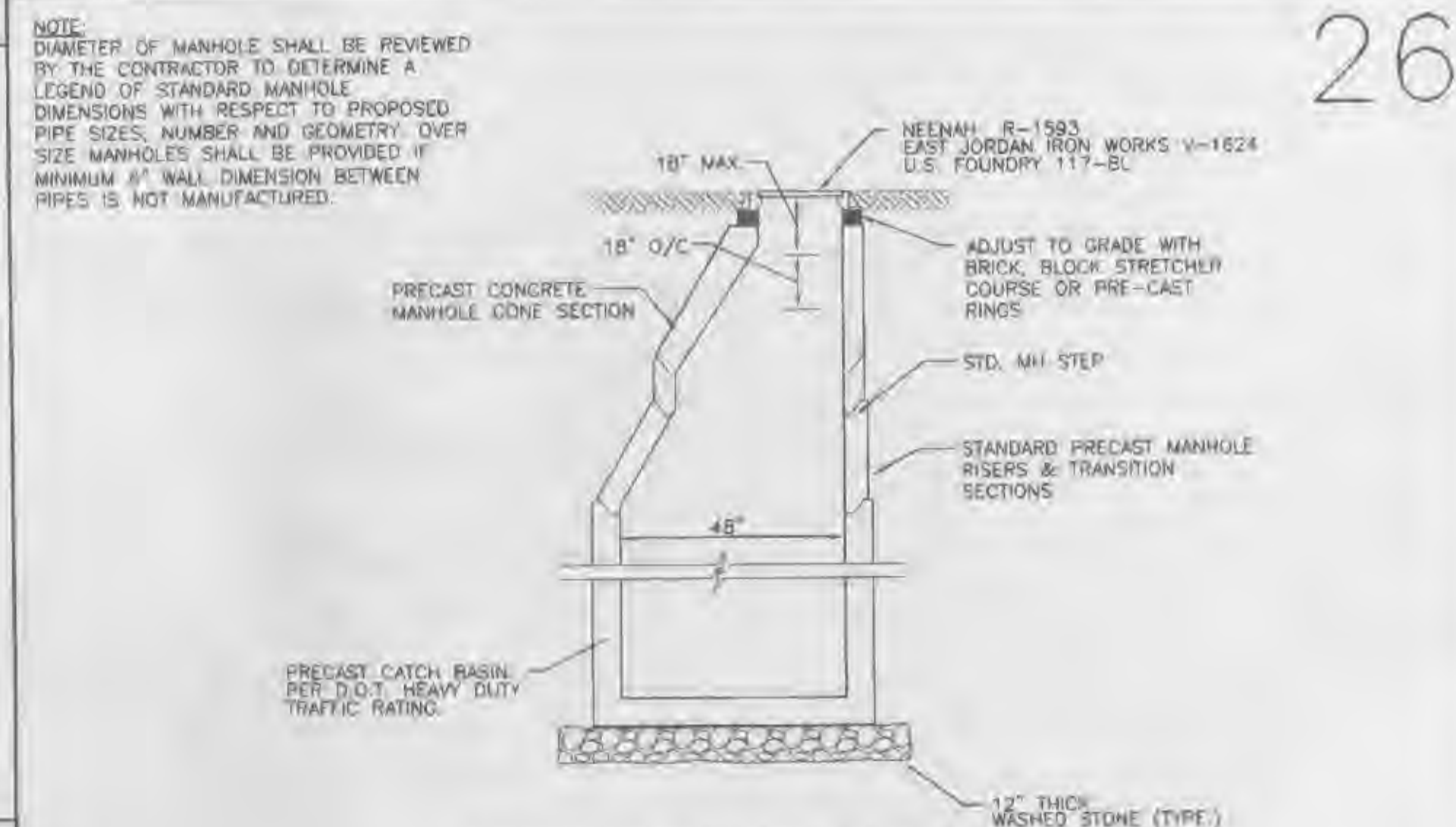
DOUBLE INLET CATCH BASIN DETAIL
NO SCALE



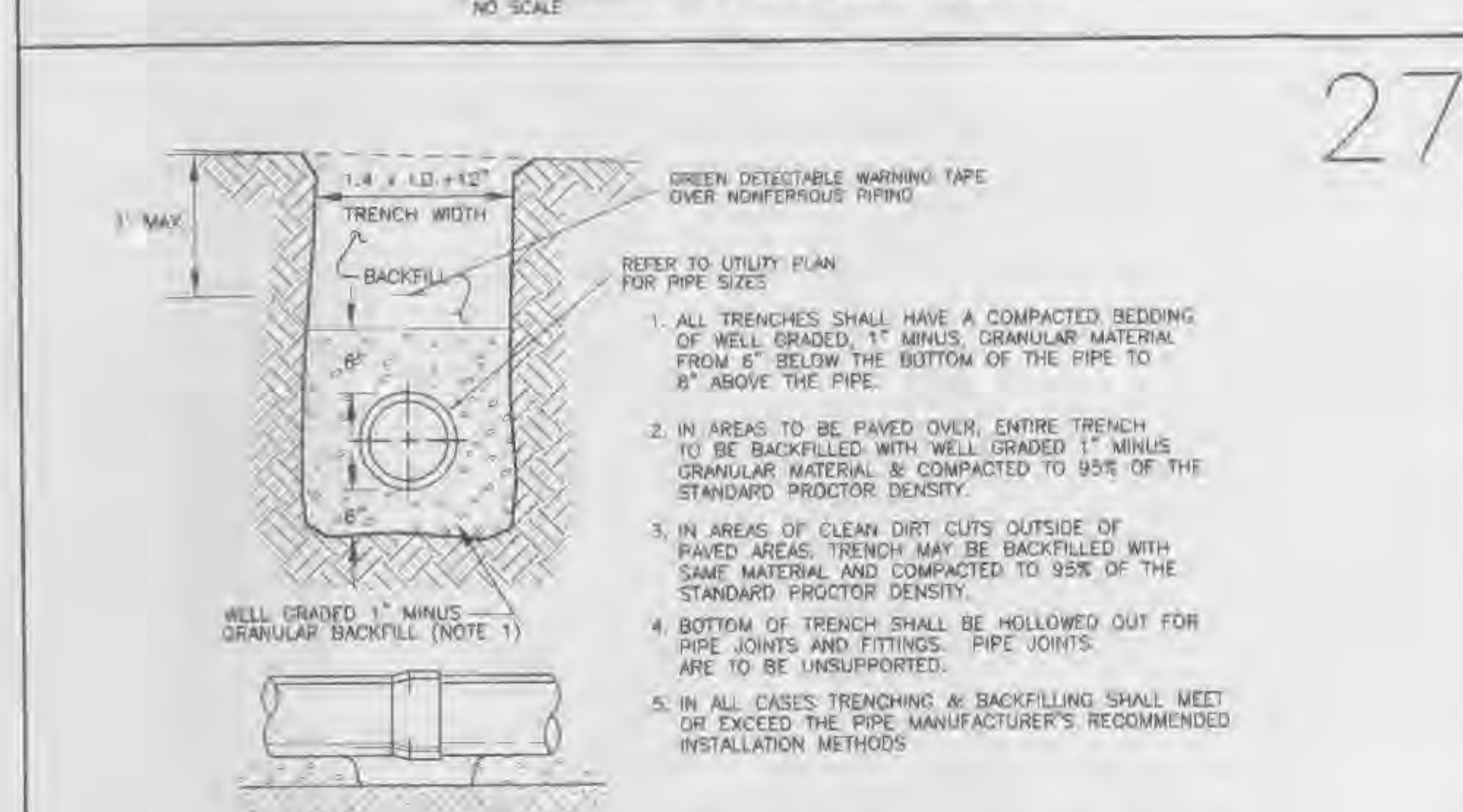
GRADED INLET DETAIL
NO SCALE



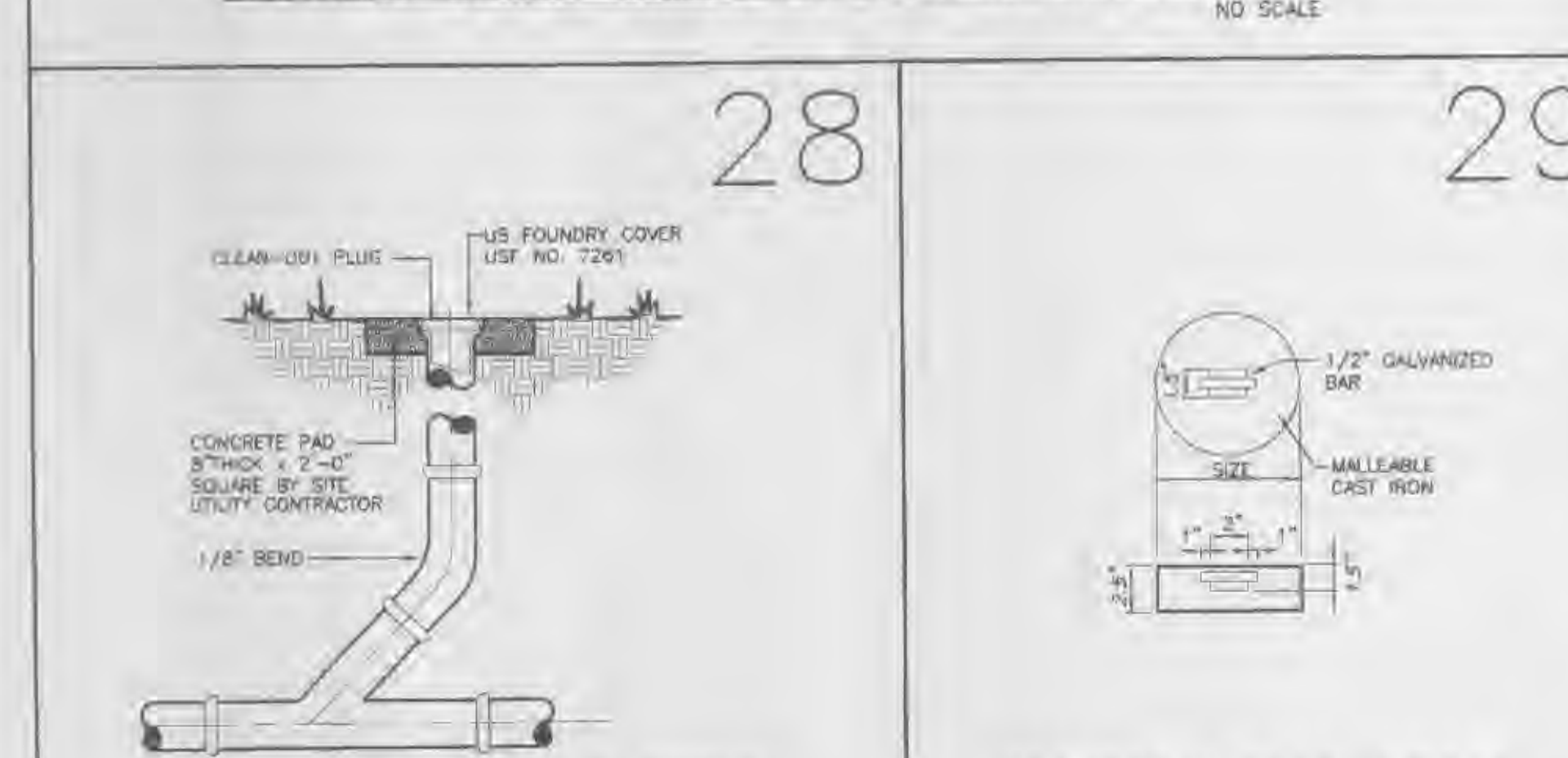
FRENCH DRAIN DETAIL
NO SCALE



STORM JUNCTION BOX DETAIL
NO SCALE

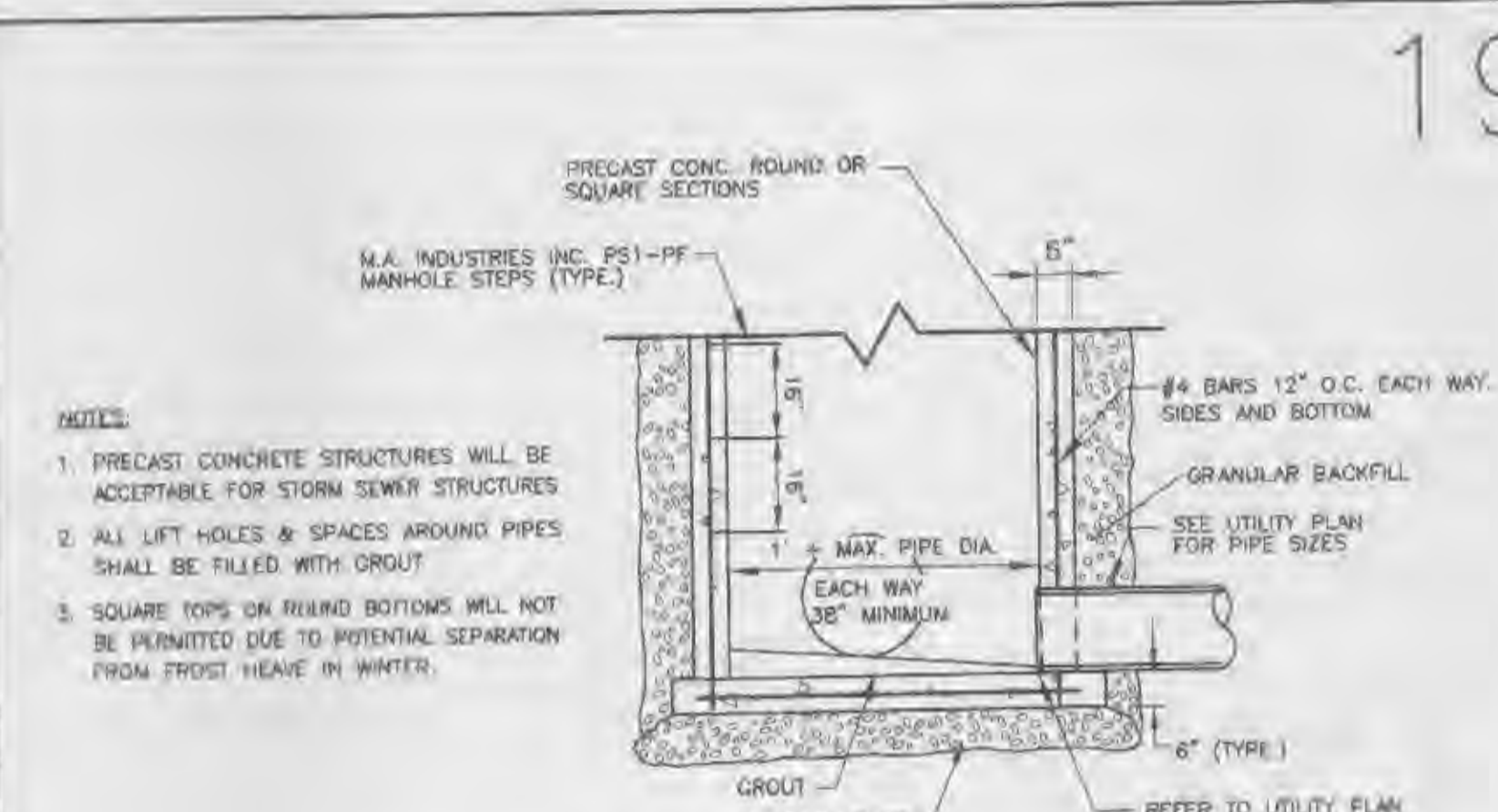


SANITARY SEWER TRENCHING AND BEDDING DETAIL
NO SCALE

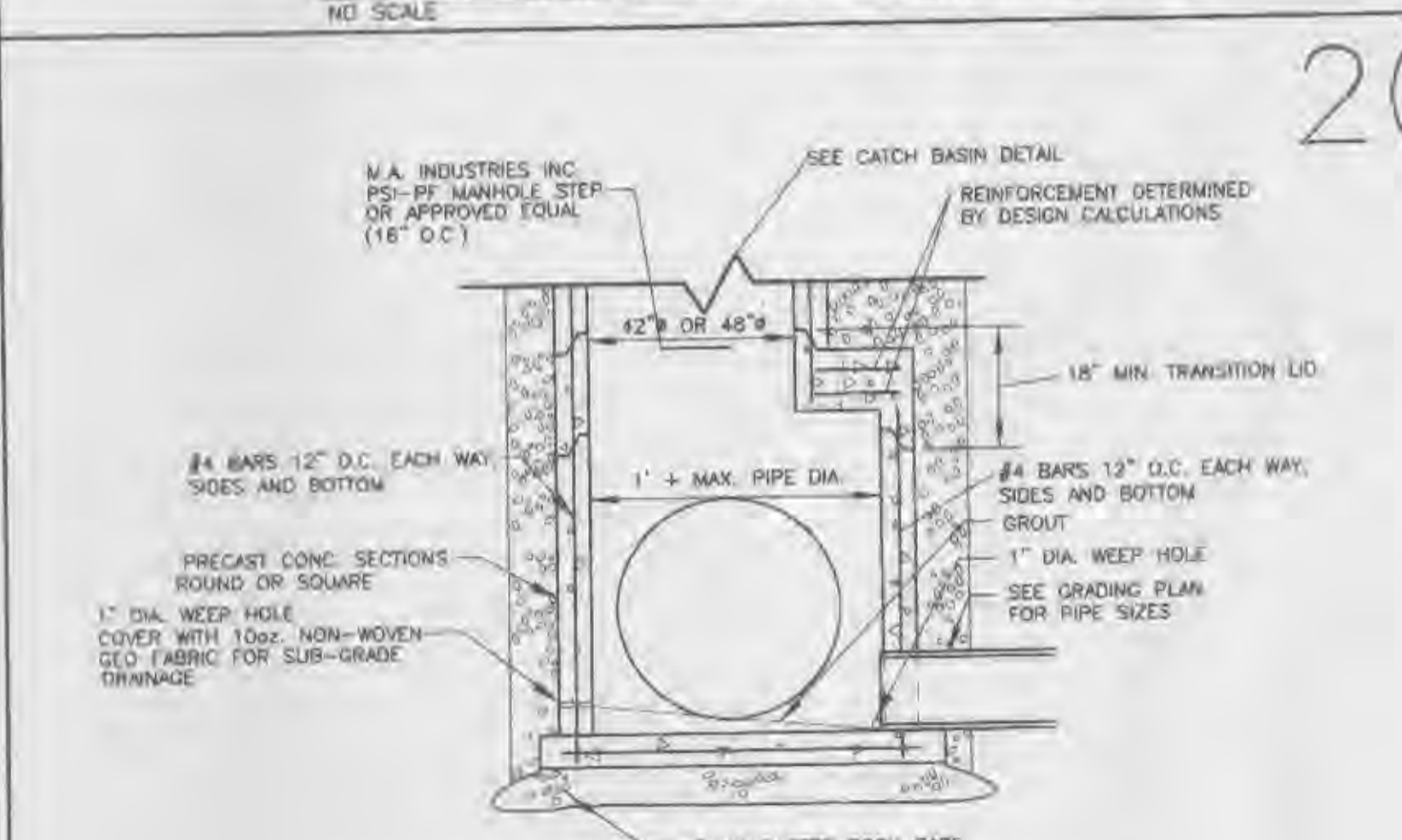


SANITARY CLEANOUT DETAIL
NO SCALE

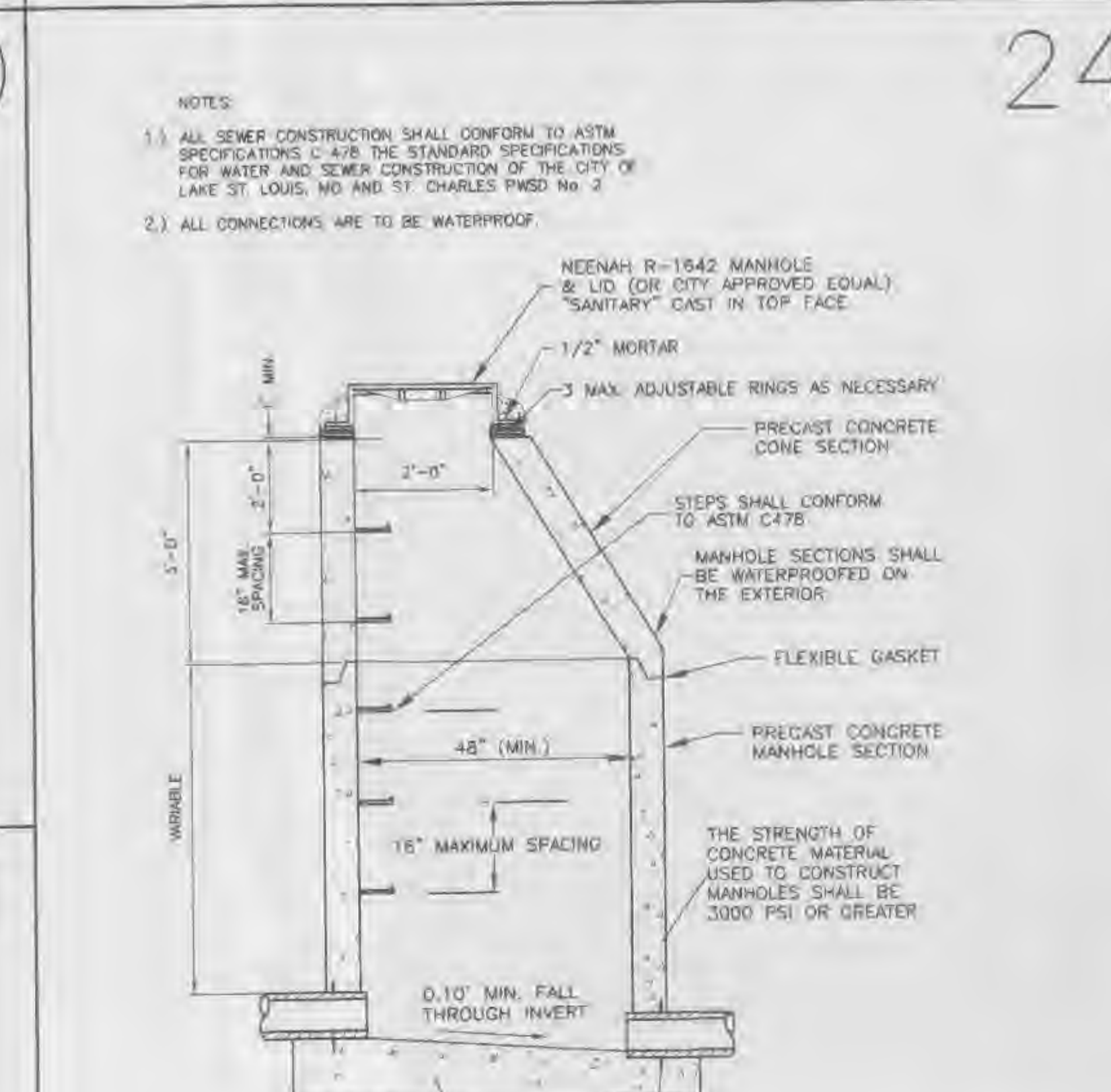
CLEANOUT PLUG DETAIL
NO SCALE



TYPICAL CATCH BASIN BOTTOM DETAIL
NO SCALE



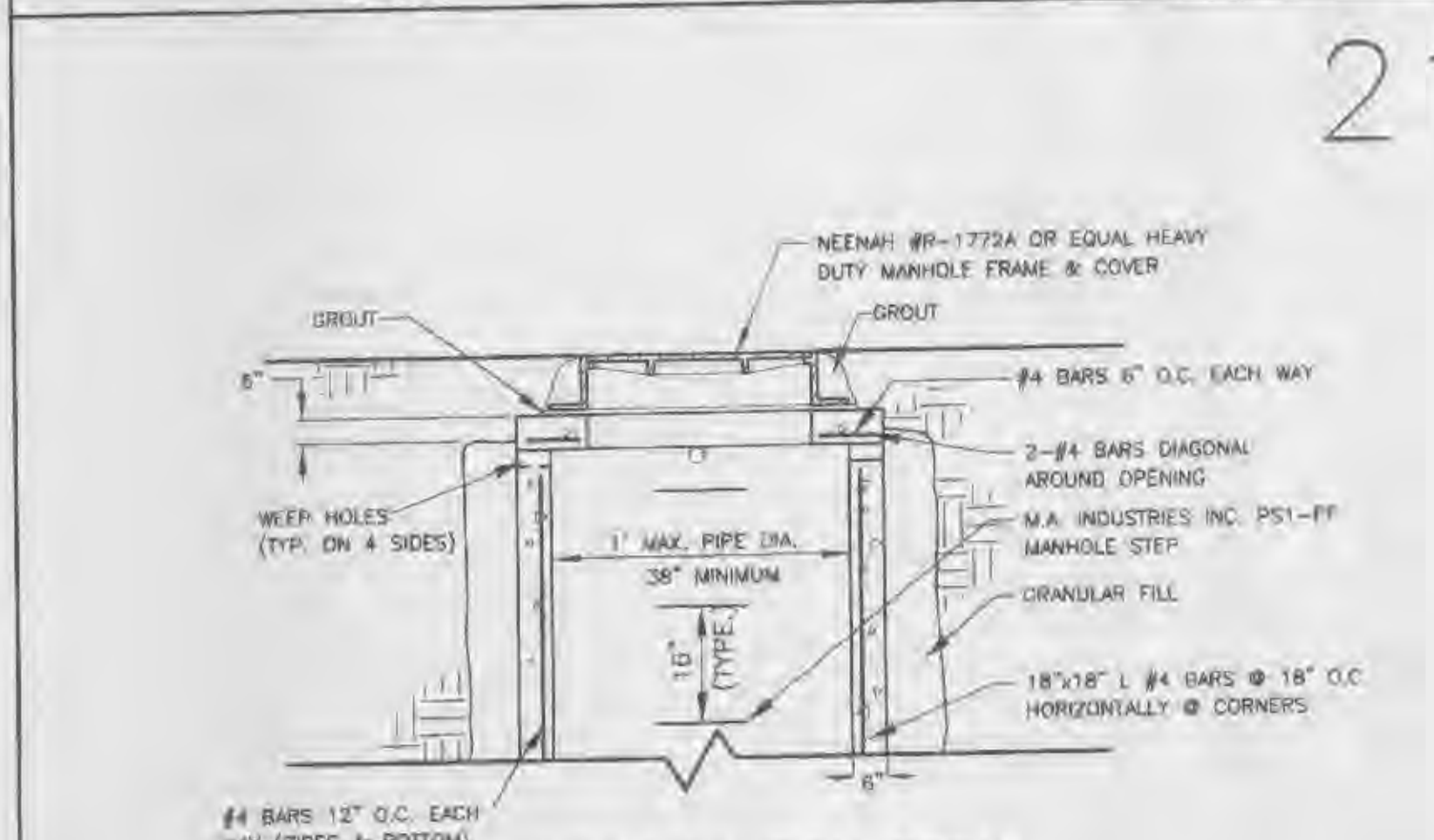
CATCH BASIN BOTTOM DETAIL FOR
PIPE SIZES LARGER THAN 36"
NO SCALE



SANITARY SEWER MANHOLE DETAIL
NO SCALE

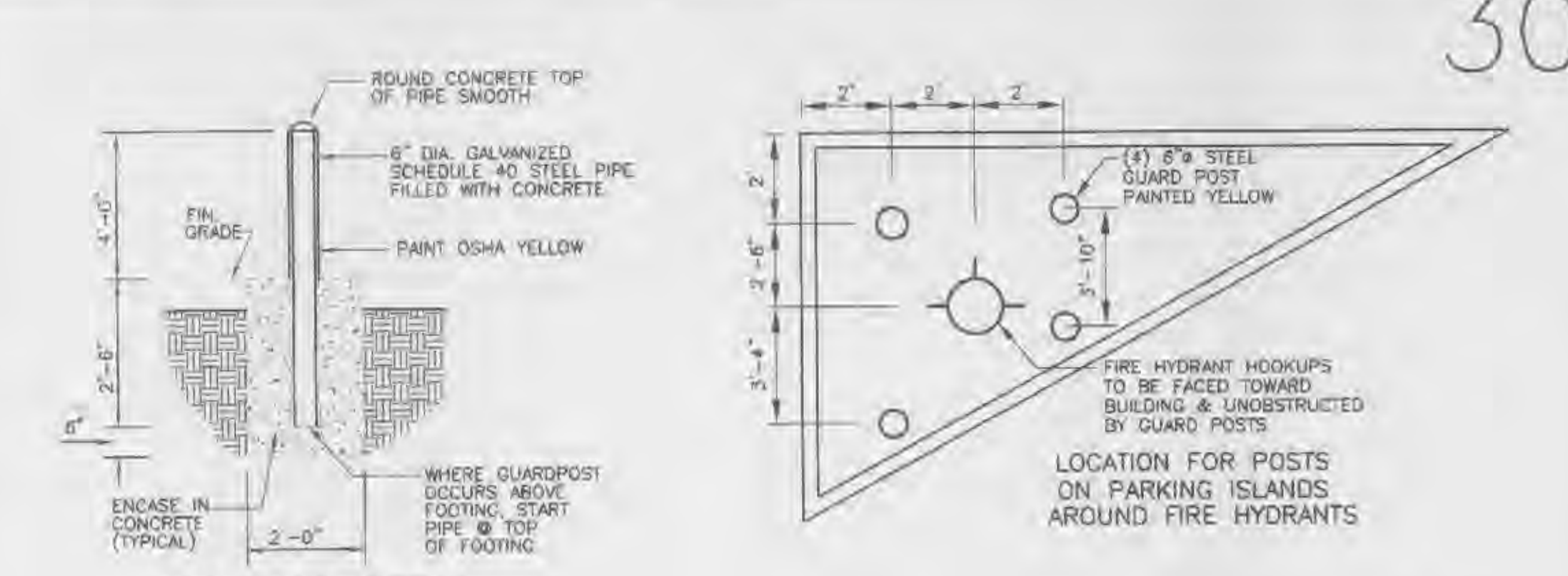
SIZE	W.A.	THICKNESS
36"	48"	5"
36"	60"	6"
42"	48"	7"
54"	60"	8"
72"	96"	9"

MANHOLE BASE SHOULD HAVE A MINIMUM DIAMETER 8" GREATER THAN THE OUTSIDE DIAMETER OF THE MANHOLE. BASE SHALL HAVE A MINIMUM 8" THICKNESS BENEATH THE MANHOLE WALL.

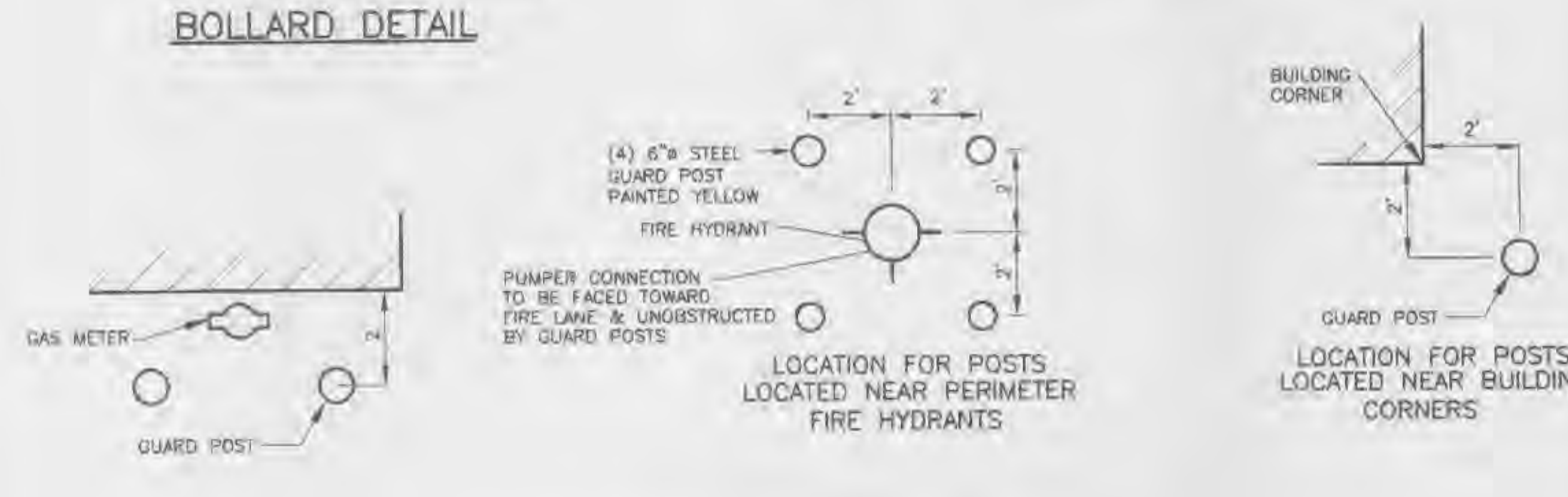


JUNCTION BOX DETAIL
NO SCALE

NOTE: REFER TO TYPICAL CATCH BASIN BOTTOM DETAIL FOR BOTTOM OF JUNCTION BOX

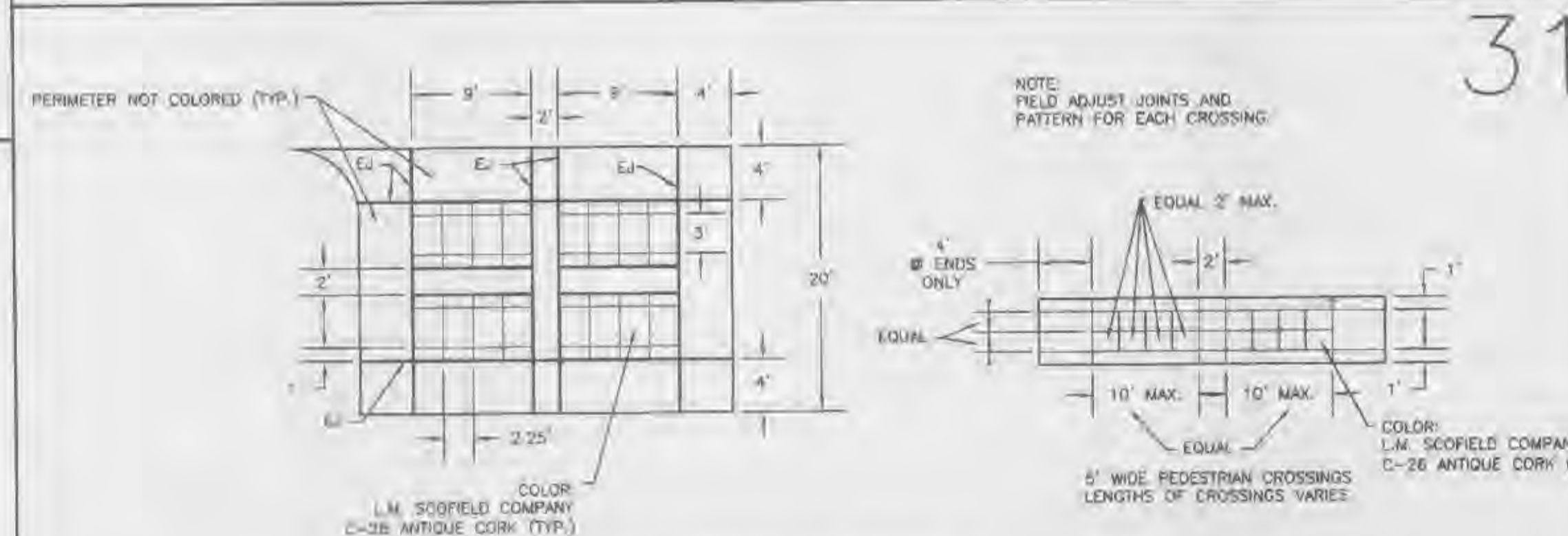


BOLLARD DETAIL



GUARD POST LOCATION DETAILS
NO SCALE

1. STEEL PIPE AND CONCRETE CAP TO RECEIVE A MINIMUM OF 2 COATS OF YELLOW PAINT.
2. OTHER GUARD POST LOCATIONS ARE SHOWN ON THE SITE PLAN.



CROSSING DETAILS
NO SCALE

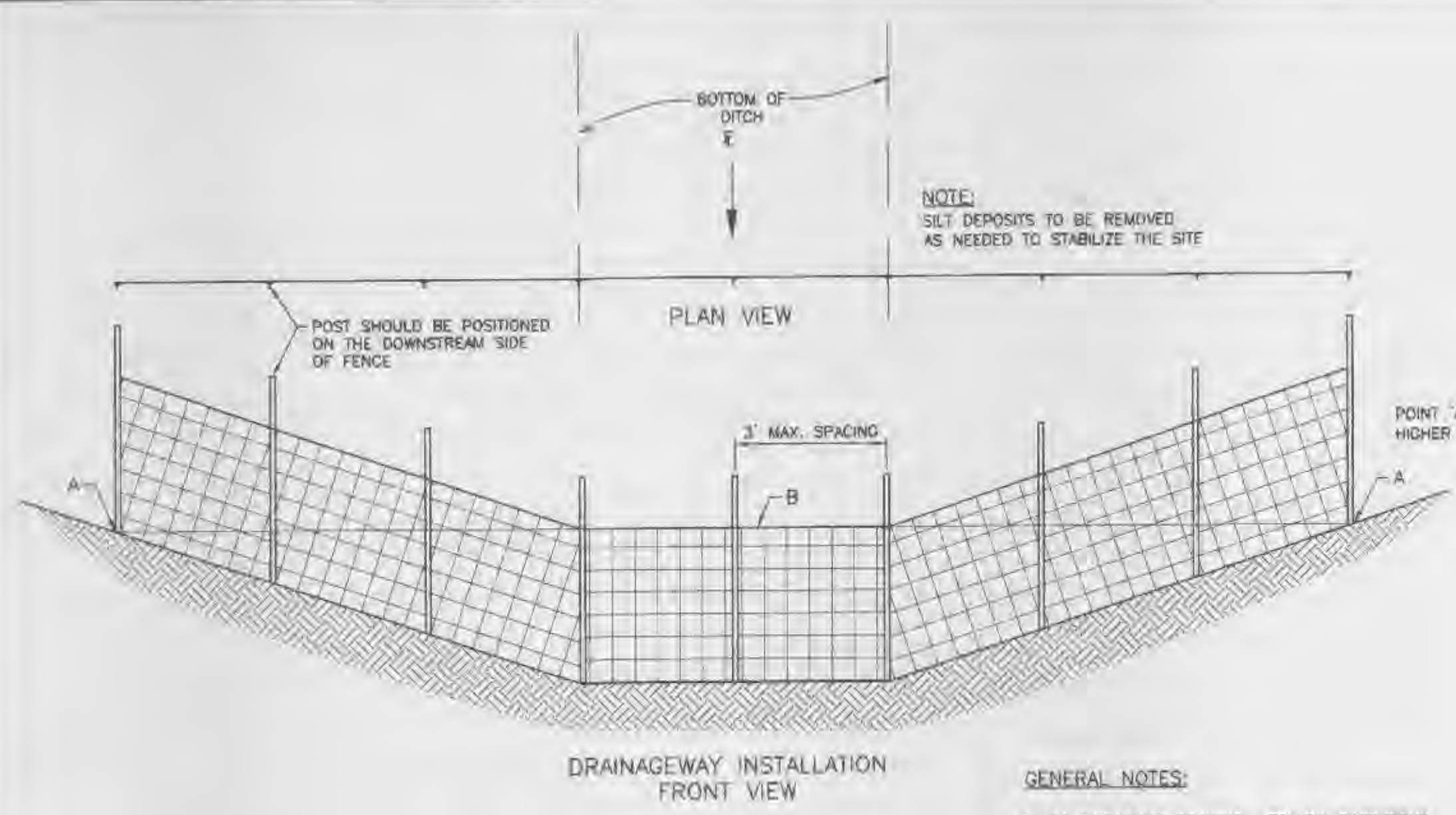
SHEET INDEX	
DETAIL 18	SINGLE CATCH BASIN DETAIL
DETAIL 19	TYPICAL CATCH BASIN BOTTOM DETAIL
DETAIL 20	CATCH BASIN BOTTOM DETAIL FOR PIPE SIZES LARGER THAN 36"
DETAIL 21	JUNCTION BOX DETAIL
DETAIL 22	GRADED INLET DETAIL
DETAIL 23	FRENCH DRAIN DETAIL
DETAIL 24	SANITARY SEWER MANHOLE DETAIL
DETAIL 25	DOUBLE INLET CATCH BASIN DETAIL
DETAIL 26	STORM JUNCTION BOX DETAIL
DETAIL 27	SANITARY SEWER TRENCHING AND BEDDING DETAIL
DETAIL 28	SANITARY CLEANOUT DETAIL
DETAIL 29	CLEANOUT PLUG DETAIL
DETAIL 30	GUARD POST LOCATION DETAILS
DETAIL 31	CROSSING DETAILS

Professional Engineer Seal for Daniel E. Maschro, State of Missouri, License #17206. Includes project information: Daniel E. Maschro, Registered Professional Engineer, State of Missouri, for Buescher Frankenberg Associates, Inc.

PRELIMINARY DRAWING
AUG 28 2002
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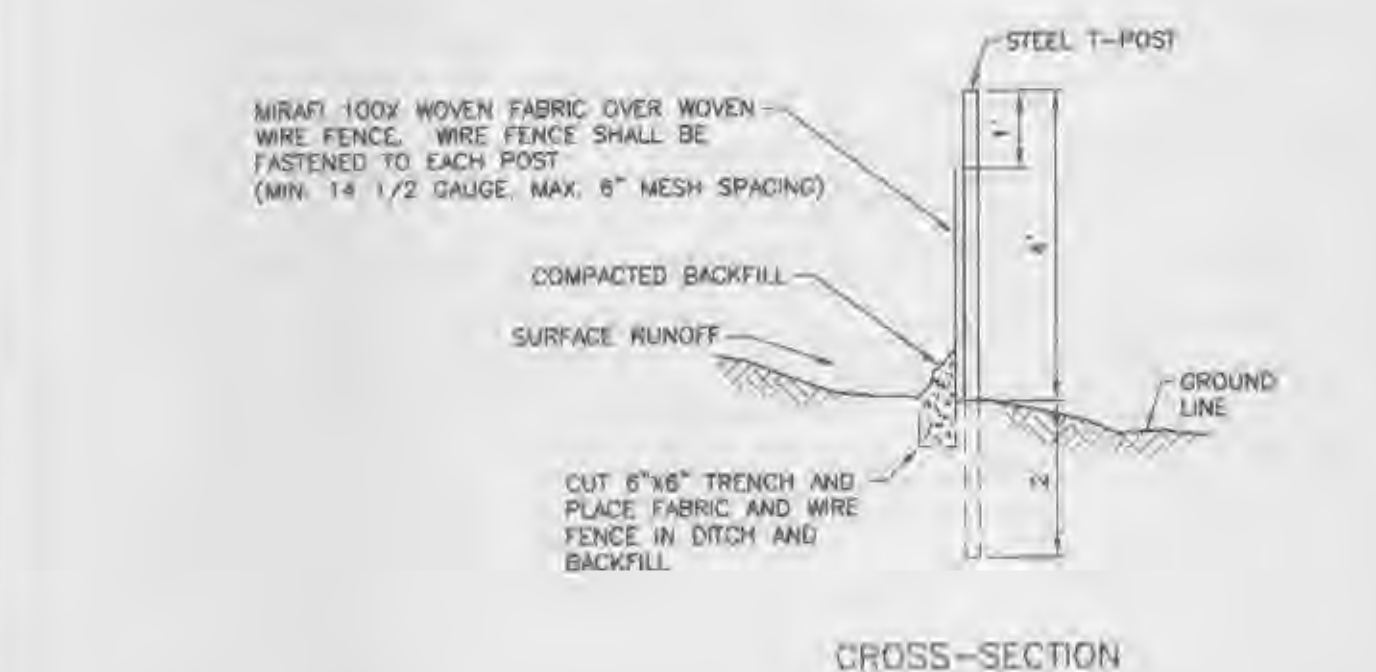
DETAIL SHEET
SHOPPES AT LAKE ST. LOUIS
FOR SCHNUCK MARKETS INC.
LAKE ST. LOUIS, ST. CHARLES CO., MISSOURI

NO.	REVISION	BY	DATE	APPROVED



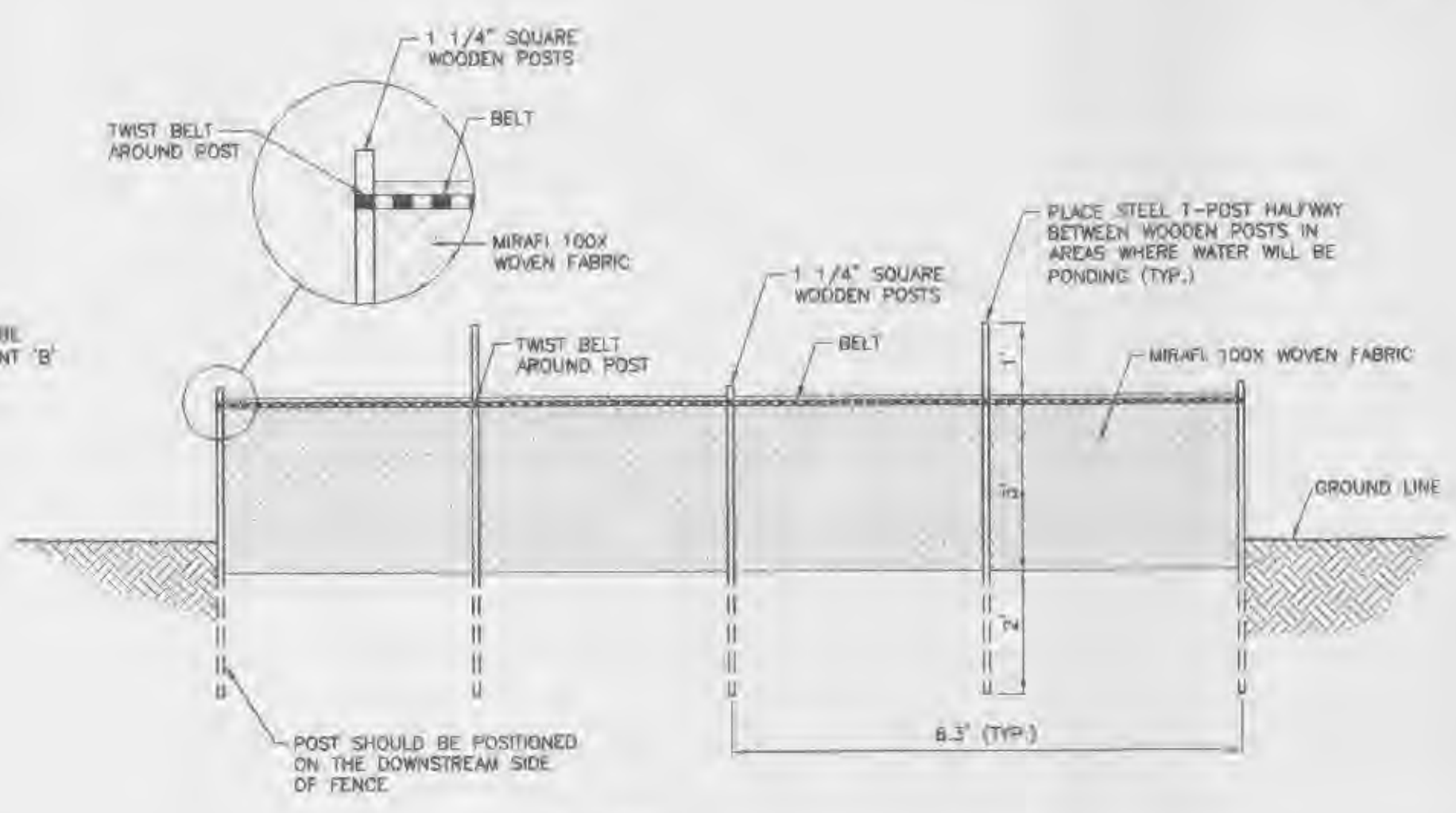
32
DRAINAGEWAY INSTALLATION FRONT VIEW

- GENERAL NOTES:**
- DO NOT SCALE DRAWING. FOLLOW DIMENSIONS.
 - SILTATION CONTROL DEVICES TO REMAIN IN PLACE UNTIL ADEQUATE VEGETATIVE GROWTH INSURES NO FURTHER EROSION OF THE SOIL.
 - SILTATION FENCES SHALL BE INSPECTED PERIODICALLY FOR DAMAGE AND FOR THE AMOUNT OF SEDIMENT WHICH HAS ACCUMULATED. REMOVAL OF SEDIMENT WILL BE REQUIRED WHEN IT REACHES 1/2 OF THE HEIGHT OF THE SILTATION FENCE.
 - SILTATION CONTROL SHALL BE INSTALLED IN ALL AREAS WHERE STORM WATER ENTERS OR LEAVES THE SITE.
 - THE EROSION CONTROL SHOWN ON THIS SET OF PLANS SHALL BE CONSIDERED THE MINIMUM ACCEPTABLE FOR THIS PROJECT. THERE MAY BE ADDITIONAL EROSION CONTROL REQUIRED DUE TO THE VARIOUS CONSTRUCTION TECHNIQUES WHICH MAY BE USED. THE CONTRACTOR IS RESPONSIBLE FOR CONTROLLING AND MAINTAINING ALL OF THE RUNOFF FROM THIS SITE IN A MANNER WHICH KEEPS ALL SILT ON SITE.

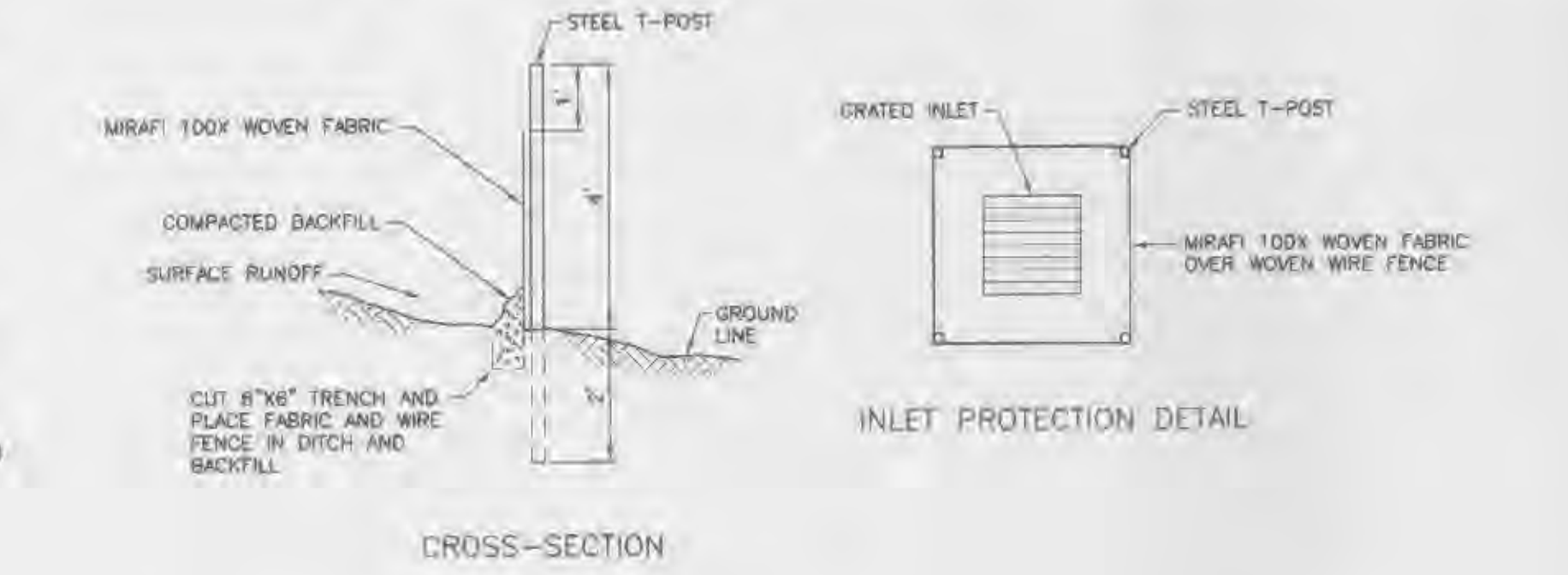


CROSS-SECTION

SILT FENCE DETAIL
NO SCALE

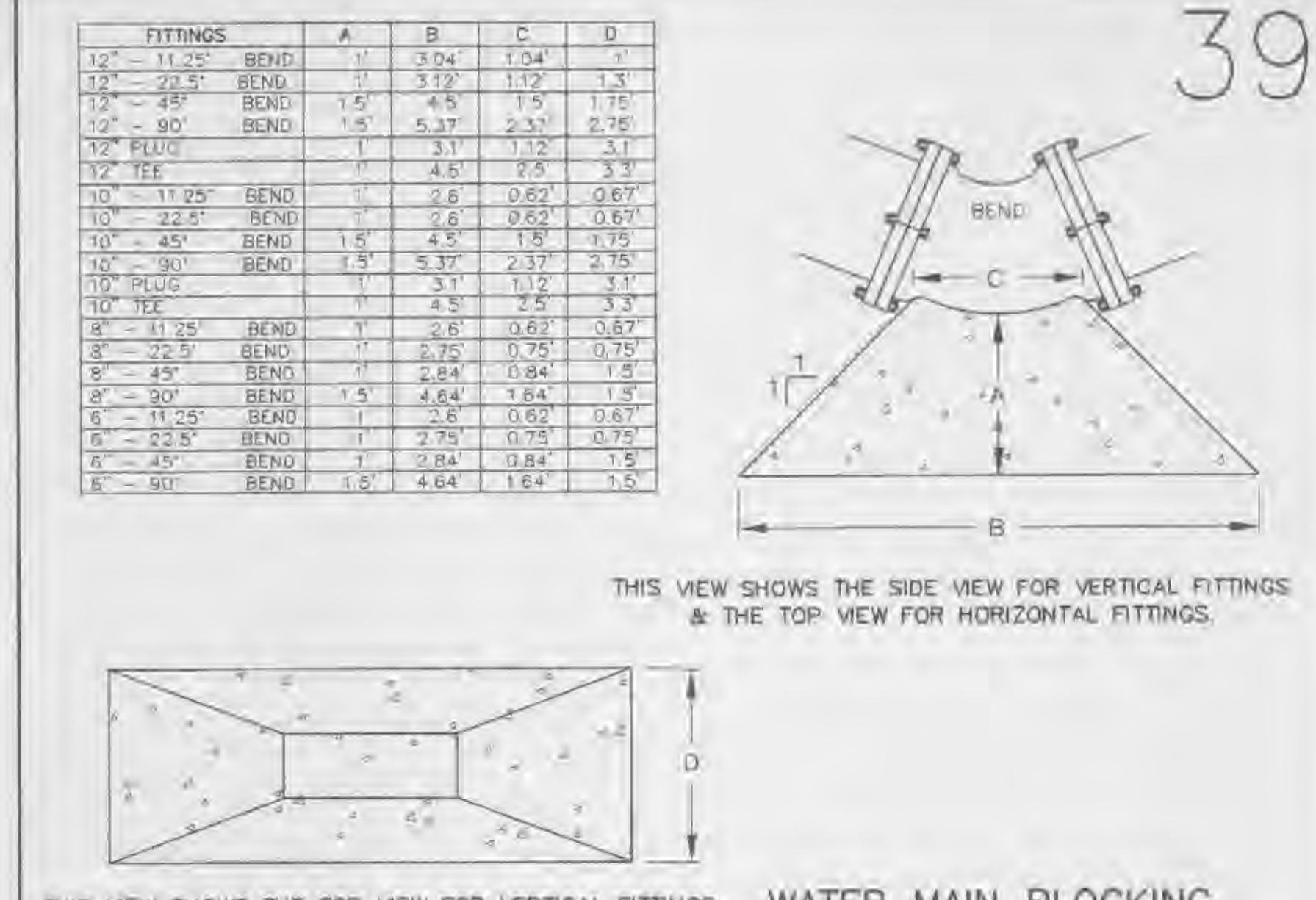


33
CROSS-SECTION



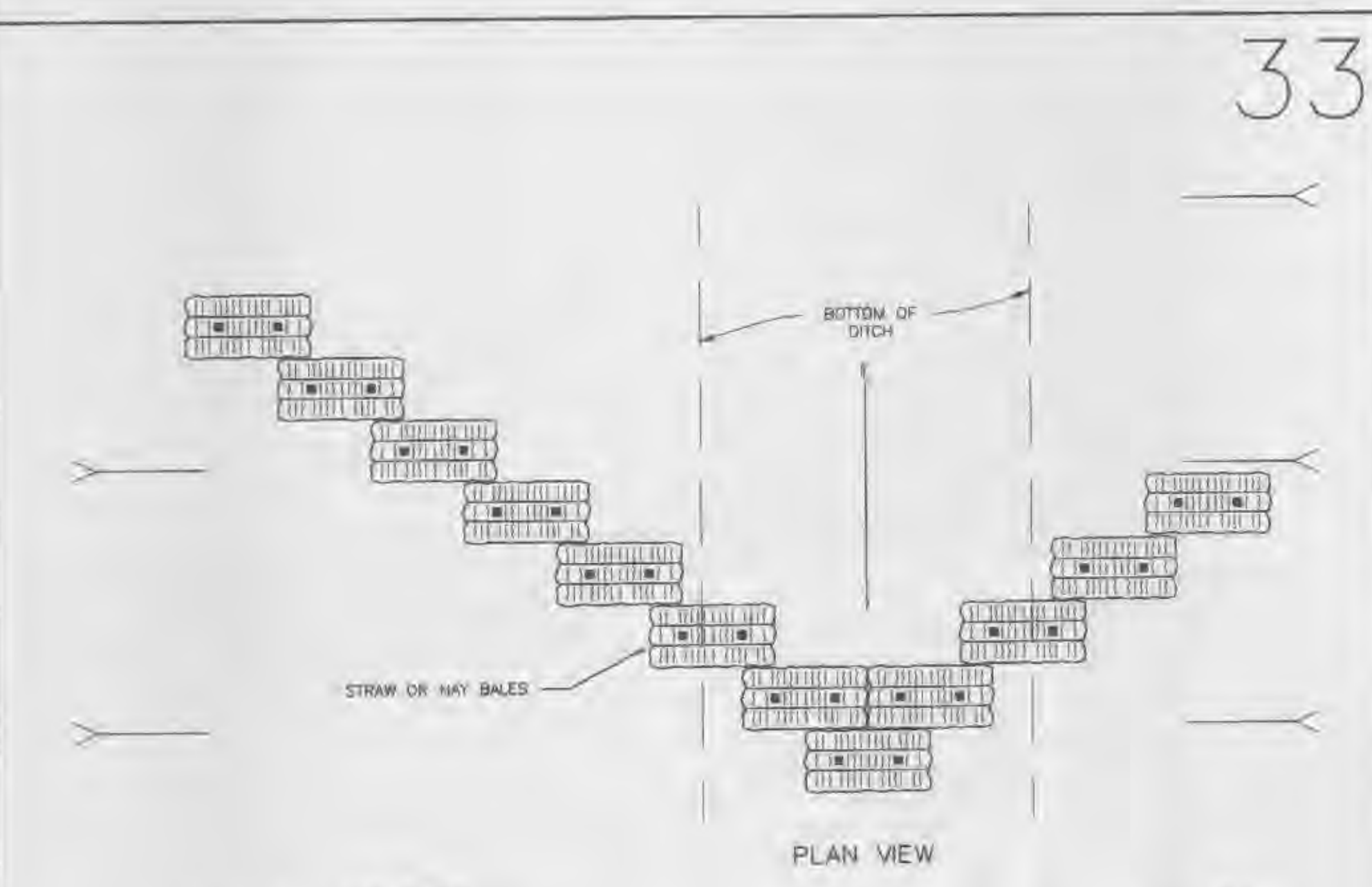
CROSS-SECTION

INLET PROTECTION DETAIL

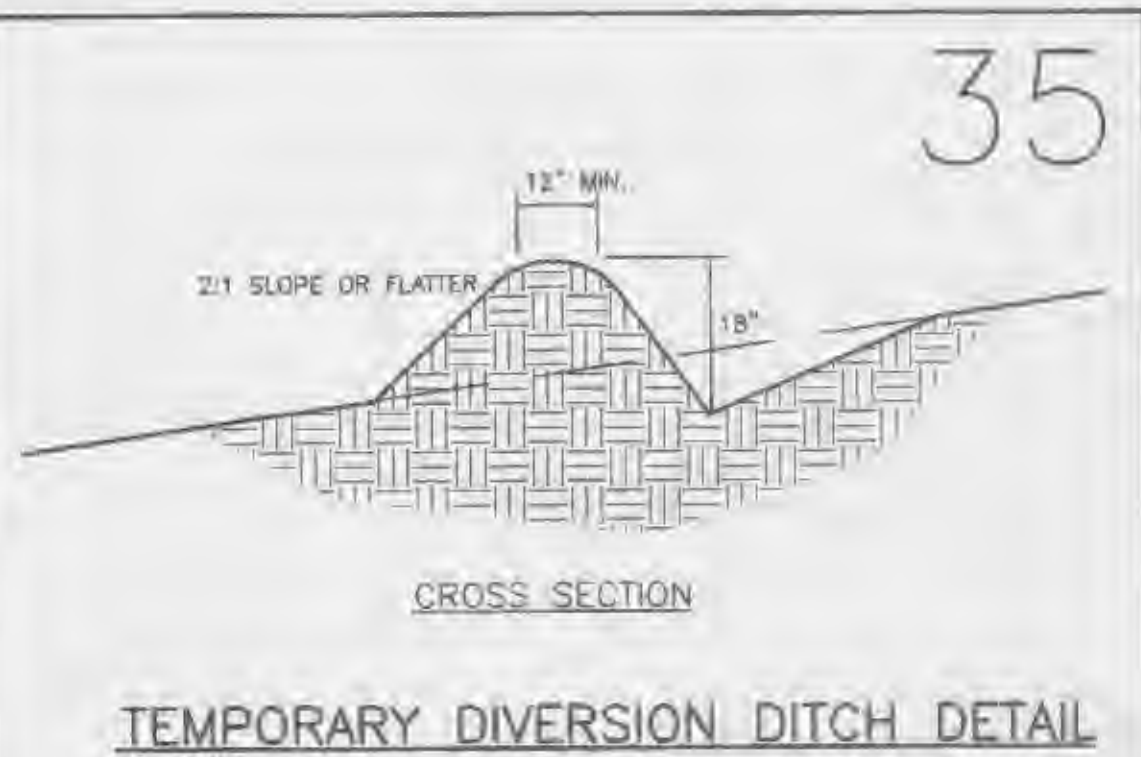


34
WATER MAIN BLOCKING
NO SCALE

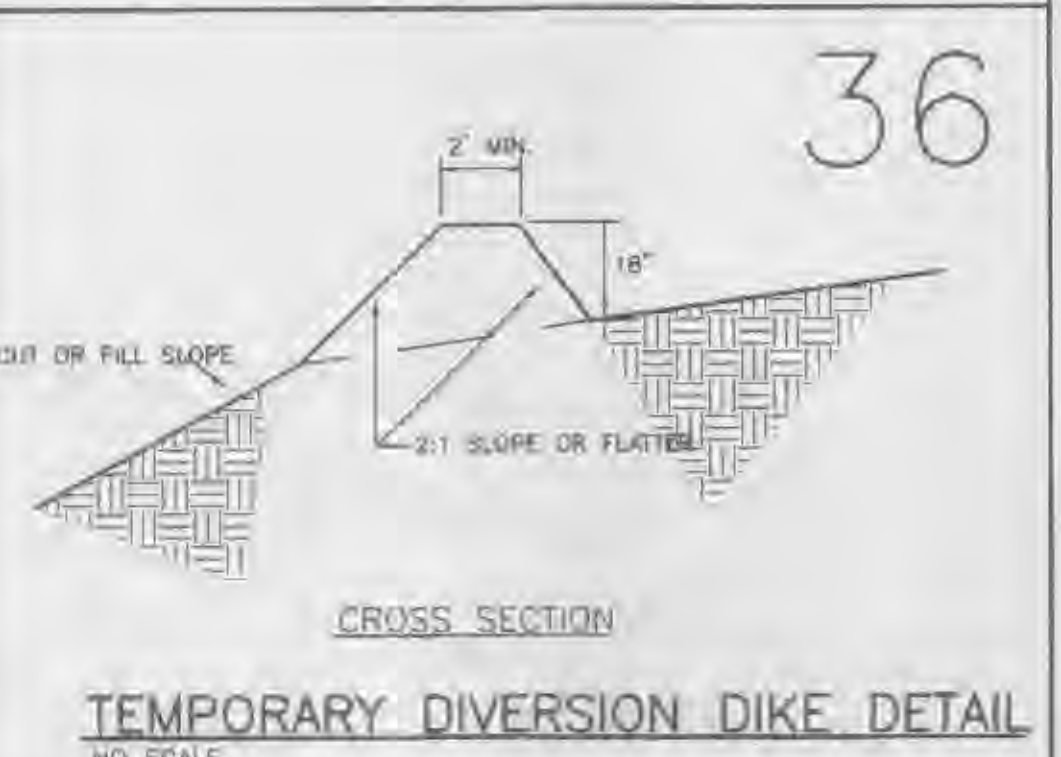
NOTE: ALL ASPECTS OF THE WATER MAIN EXTENSION, FIRE HYDRANTS, VALVES, TAPPING SLEEVES, ETC. SHALL MEET THE REQUIREMENTS OF THE CITY OF LAKE ST. LOUIS AND ST. CHARLES PWD NO. 2.



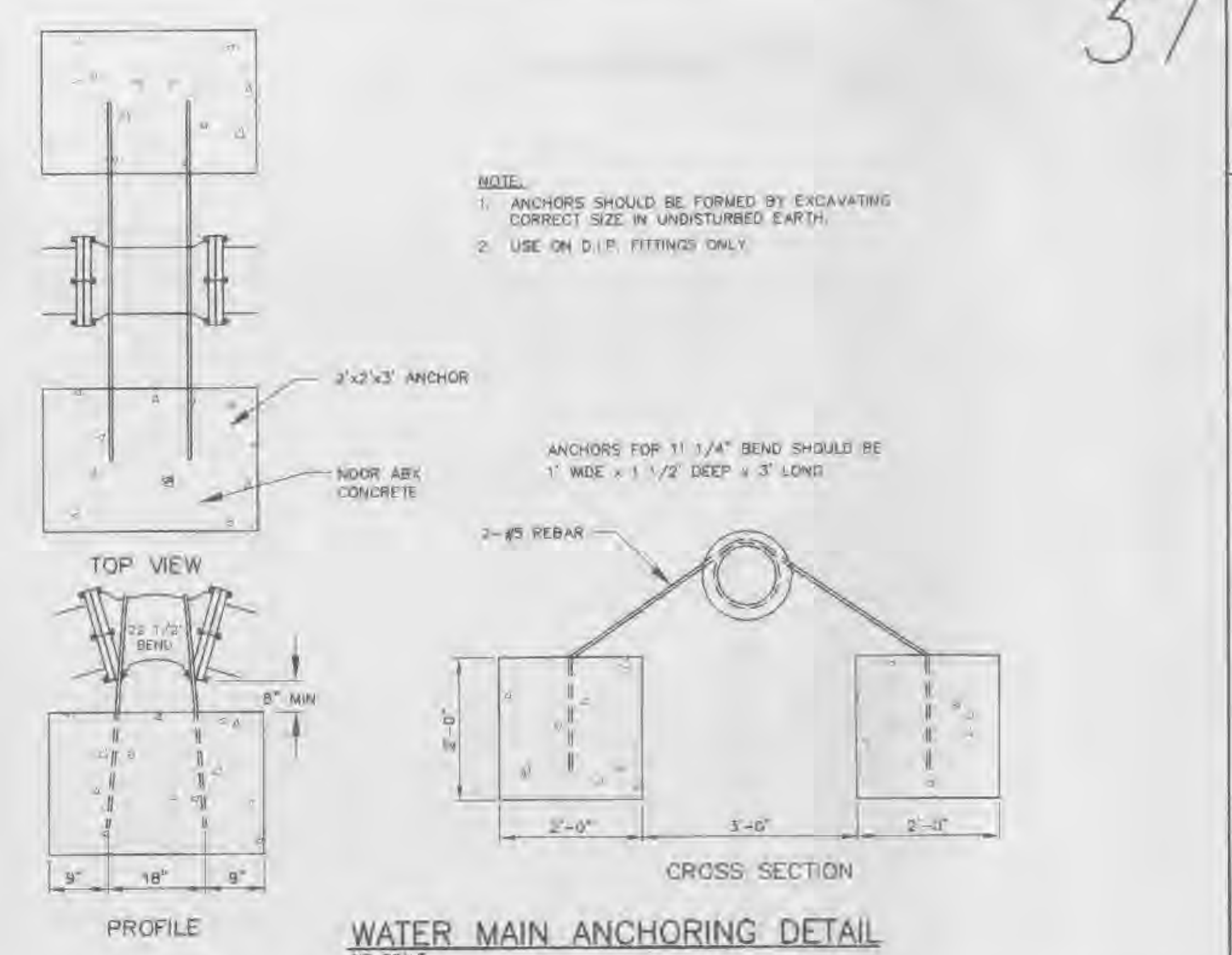
33
STRAW OR HAY BALE DETAIL
NO SCALE



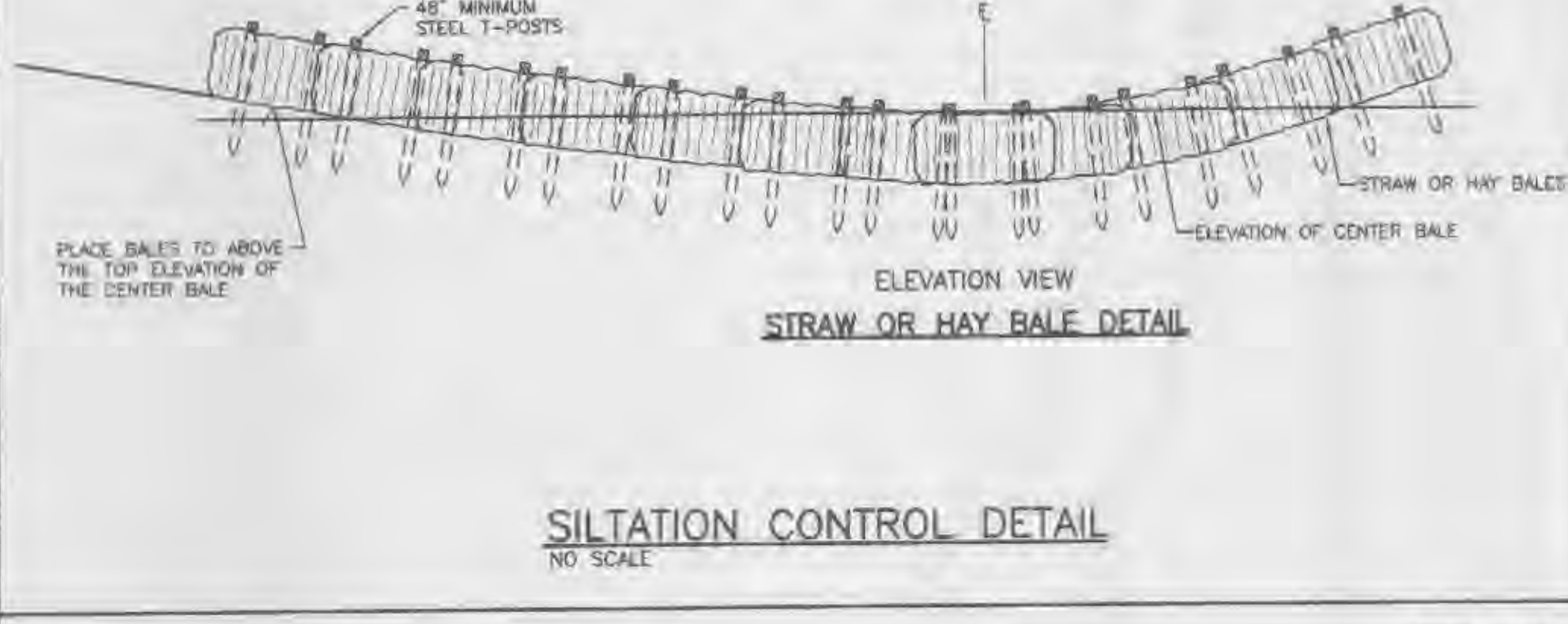
35
TEMPORARY DIVERSION DITCH DETAIL
NO SCALE



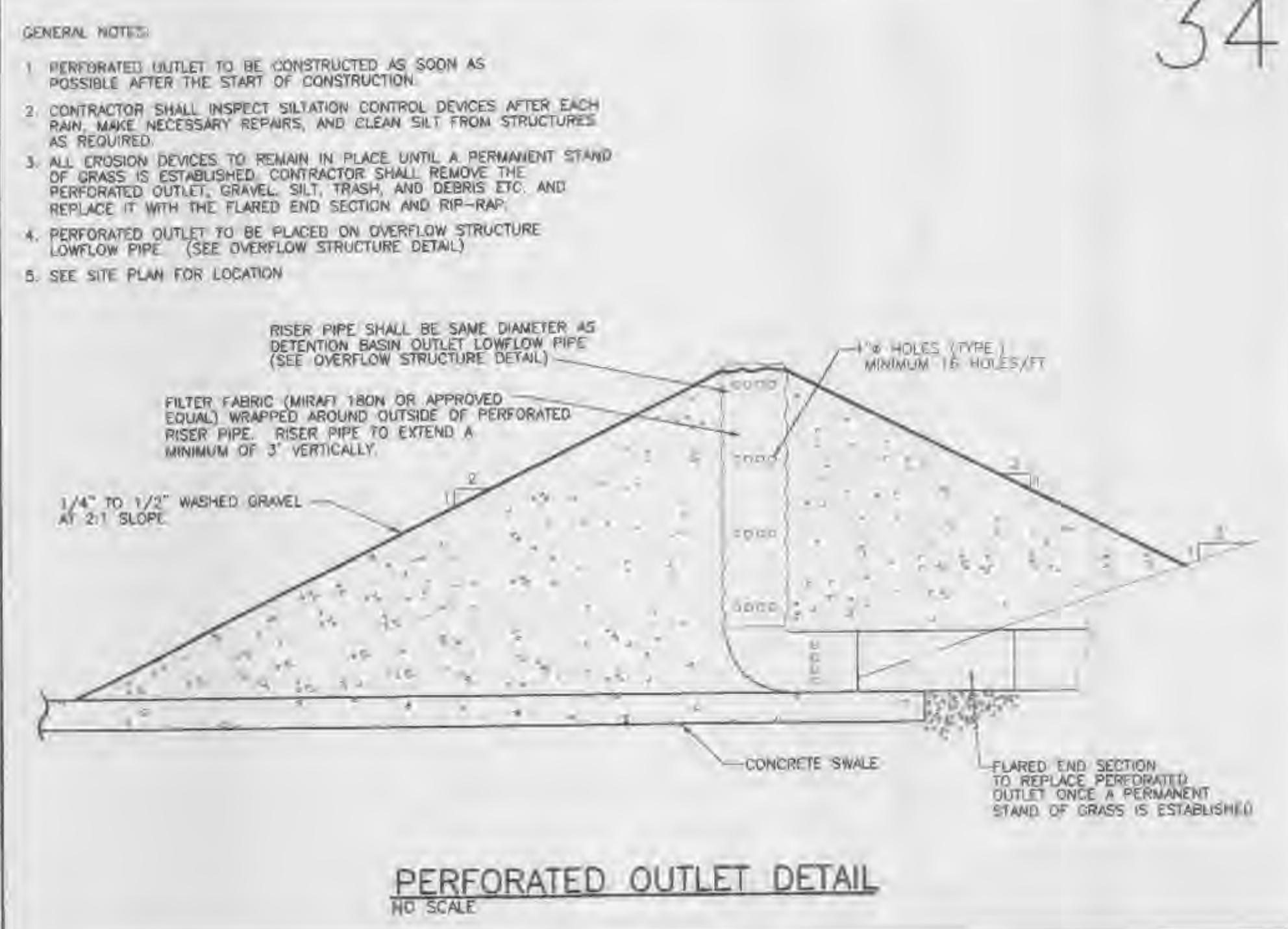
36
TEMPORARY DIVERSION DIKE DETAIL
NO SCALE



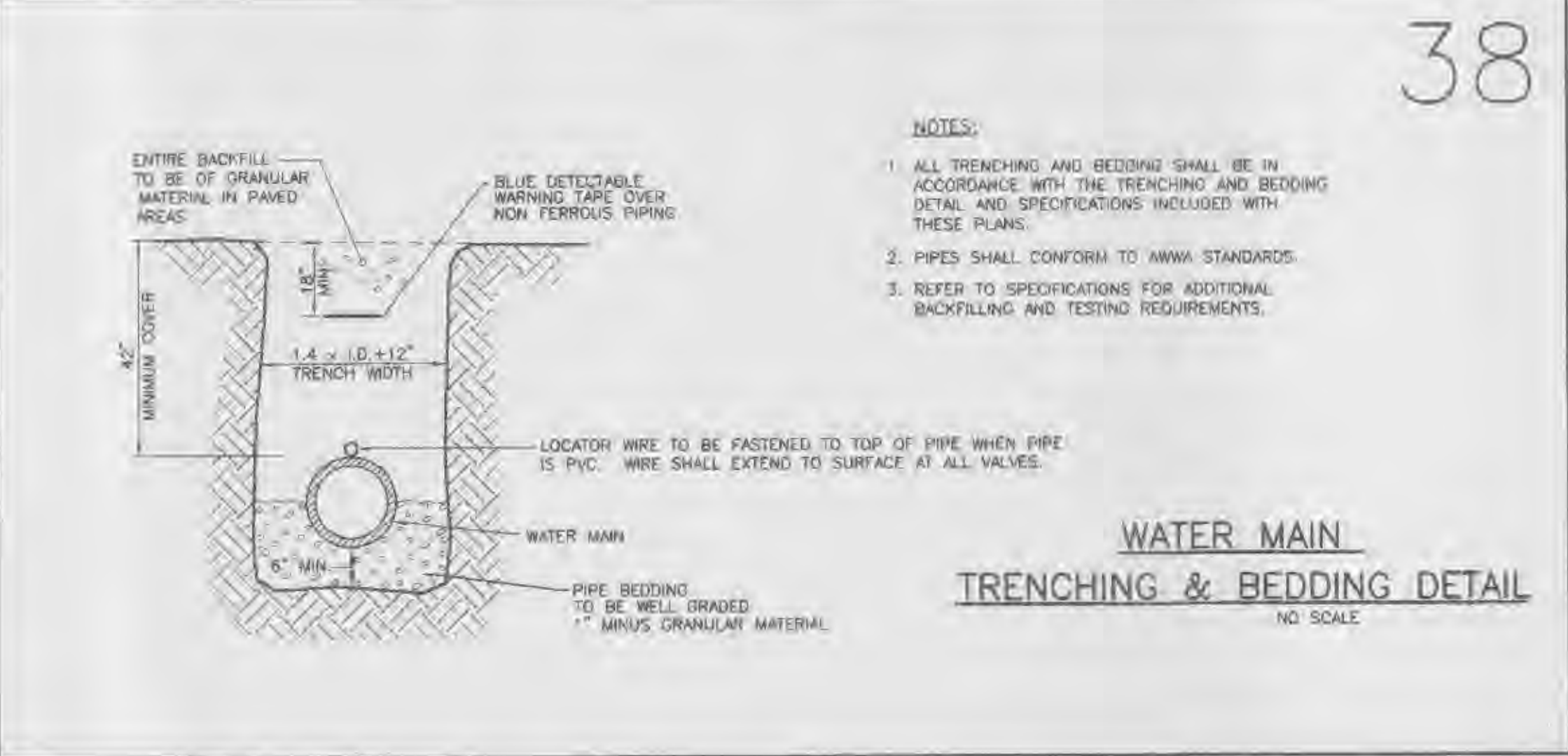
37
WATER MAIN ANCHORING DETAIL
NO SCALE



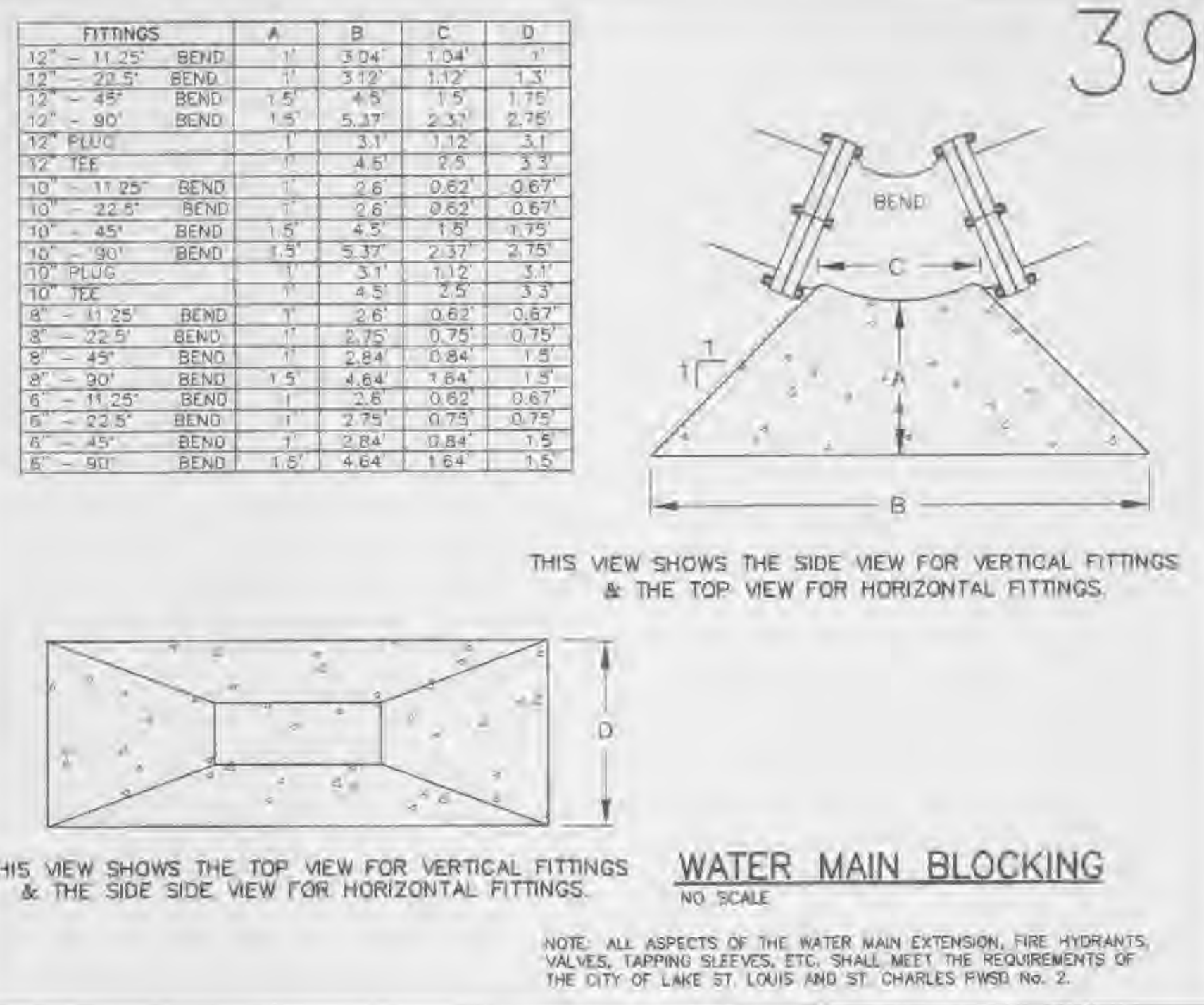
33
SILTATION CONTROL DETAIL
NO SCALE



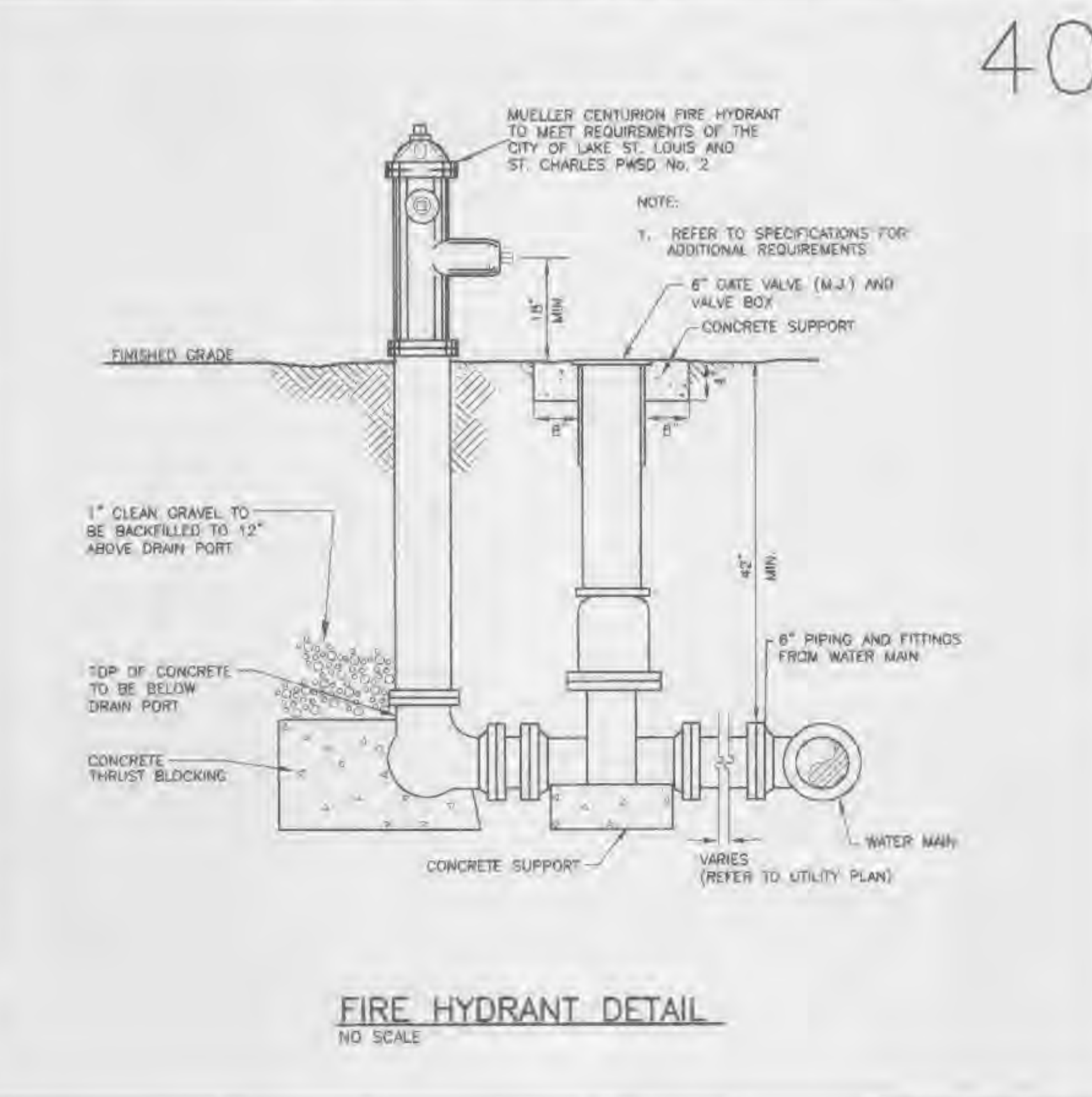
34
PERFORATED OUTLET DETAIL
NO SCALE



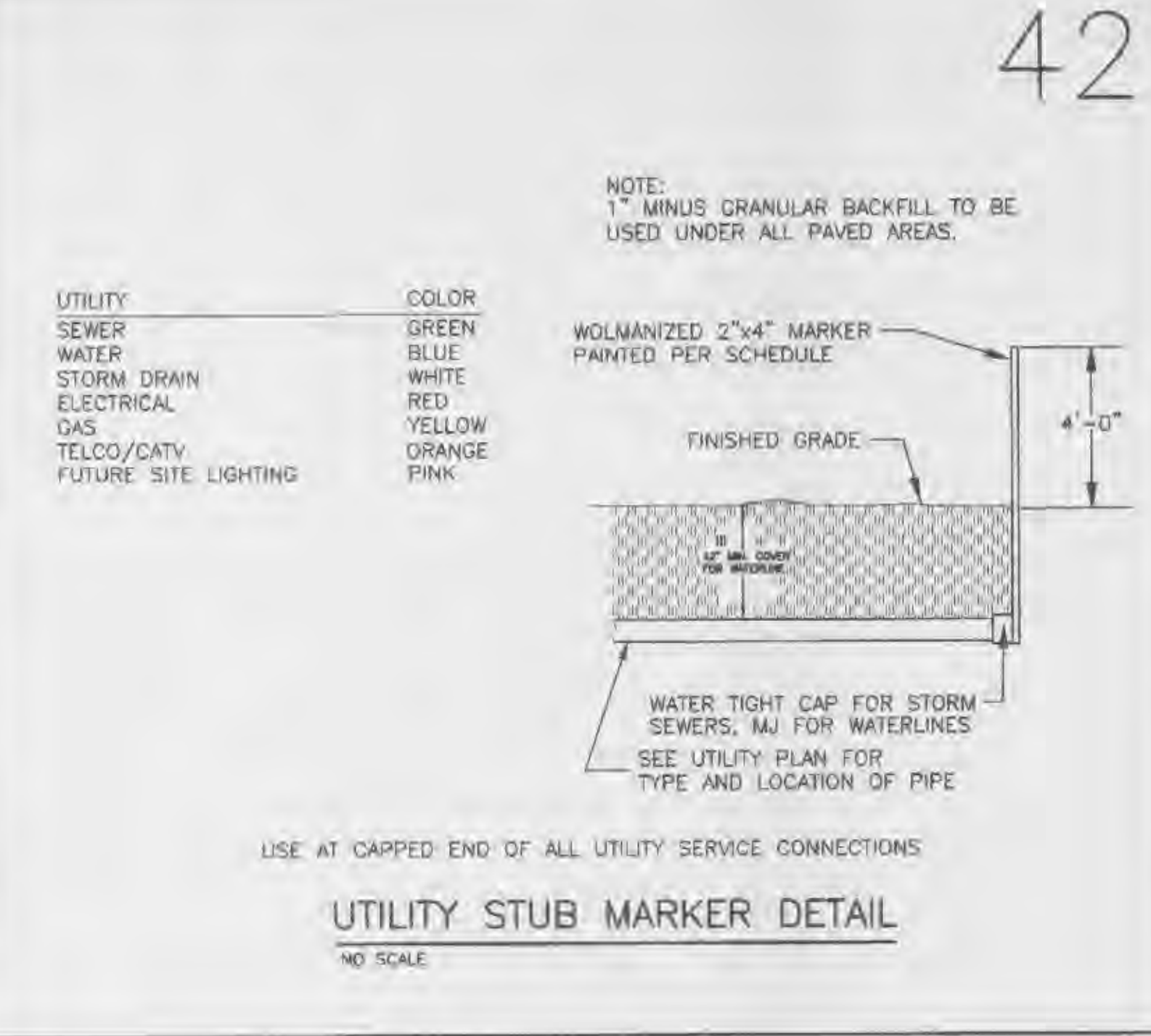
38
WATER MAIN TRENCHING & BEDDING DETAIL
NO SCALE



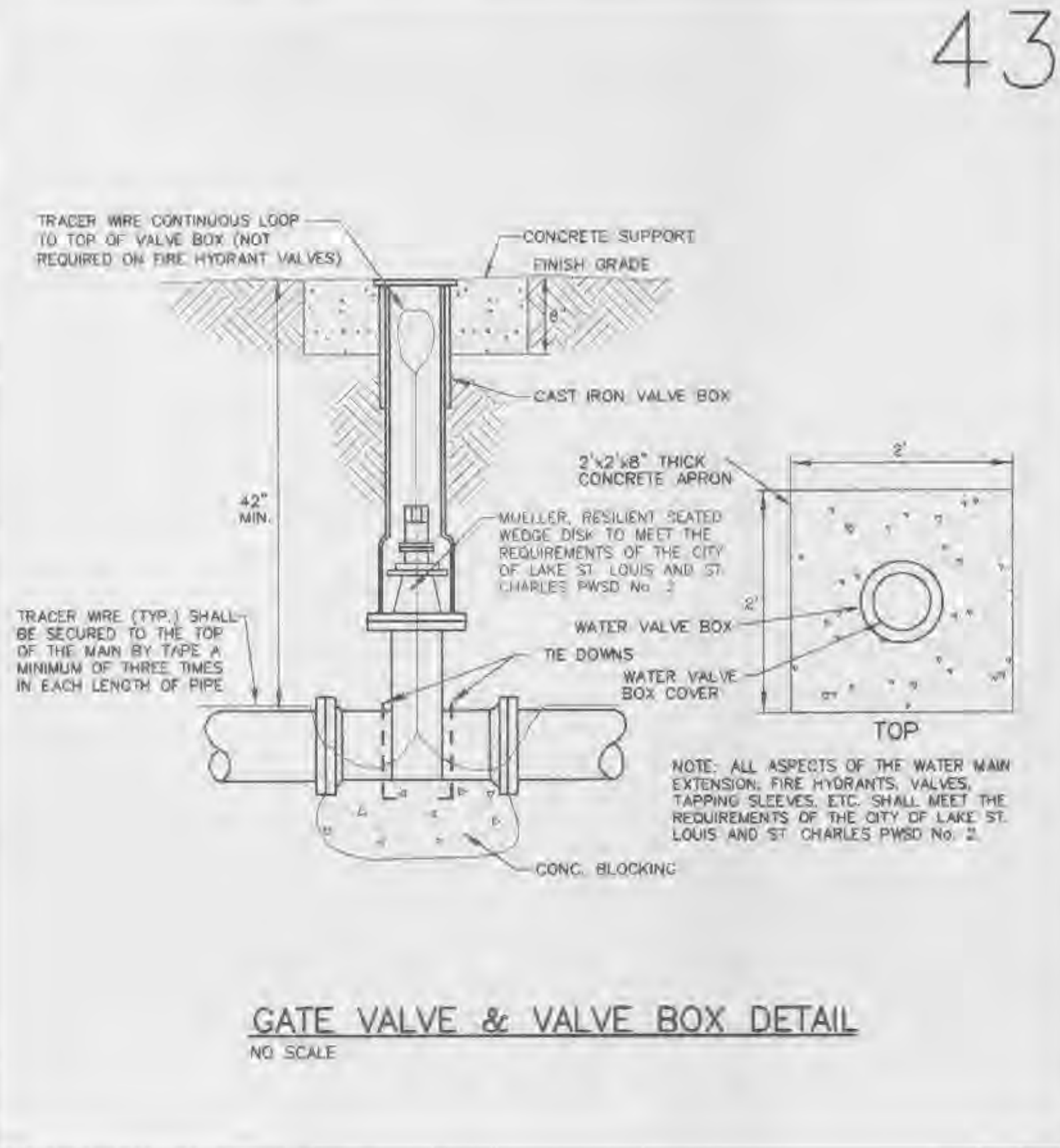
39
FIRE HYDRANT DETAIL
NO SCALE



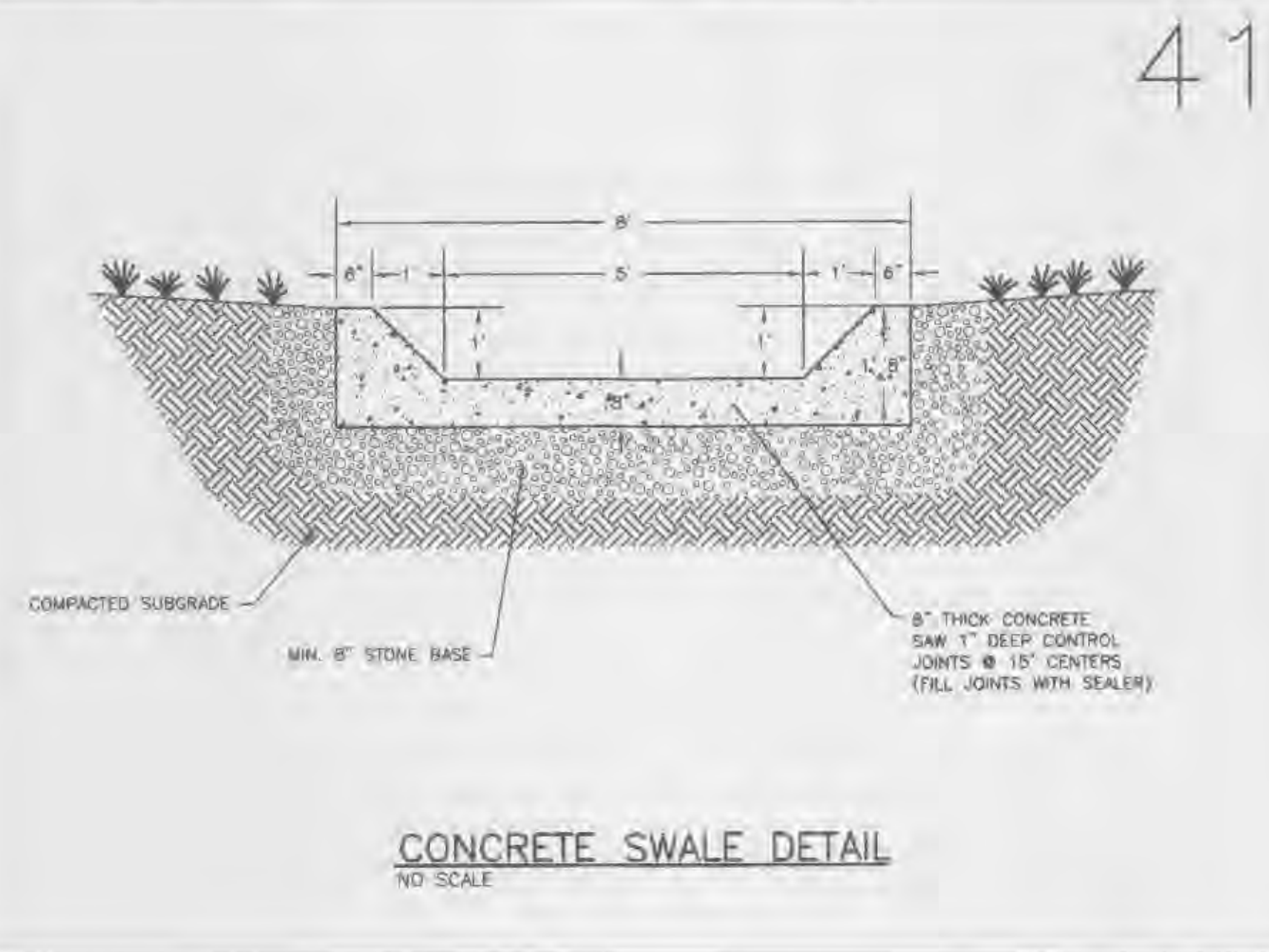
40
CONCRETE SWALE DETAIL
NO SCALE



41
UTILITY STUB MARKER DETAIL
NO SCALE



42
GATE VALVE & VALVE BOX DETAIL
NO SCALE



40
CONCRETE SWALE DETAIL
NO SCALE



PRELIMINARY DRAWING
AUG 26 2002

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SHOPPES AT LAKE ST. LOUIS
FOR SCHNUCK MARKETS INC.
LAKE ST. LOUIS, ST. CHARLES CO., MISSOURI

BUESCHER FRANKENBERG ASSOCIATES, INC.

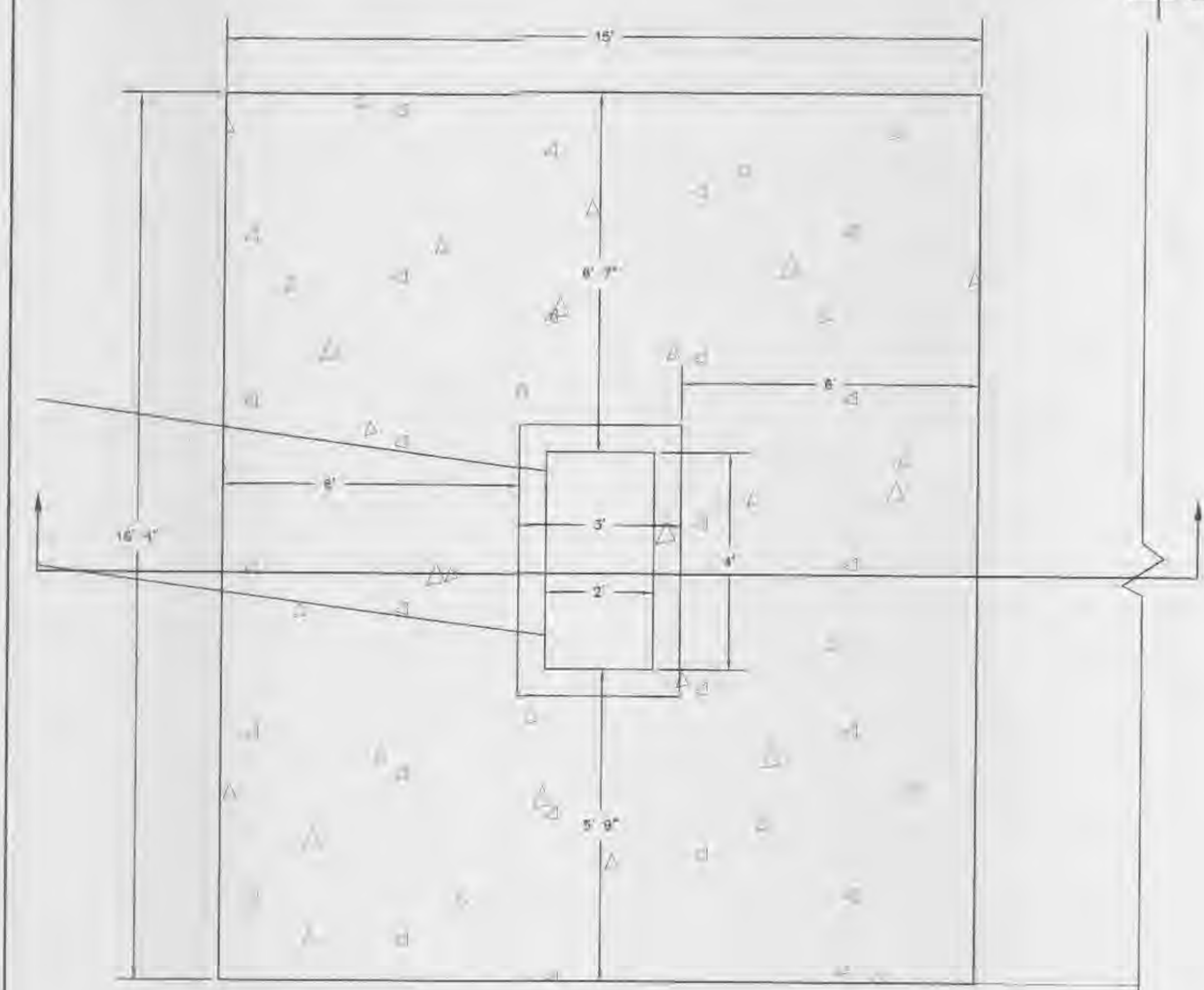
Daniel E. Maschner
Registered Professional Engineer
State of Missouri
for Buescher Frankenberg Associates, Inc.

Two working days prior to the start of any excavation on this site, contractor shall call 1-800-DIG-RITE for utility location information.

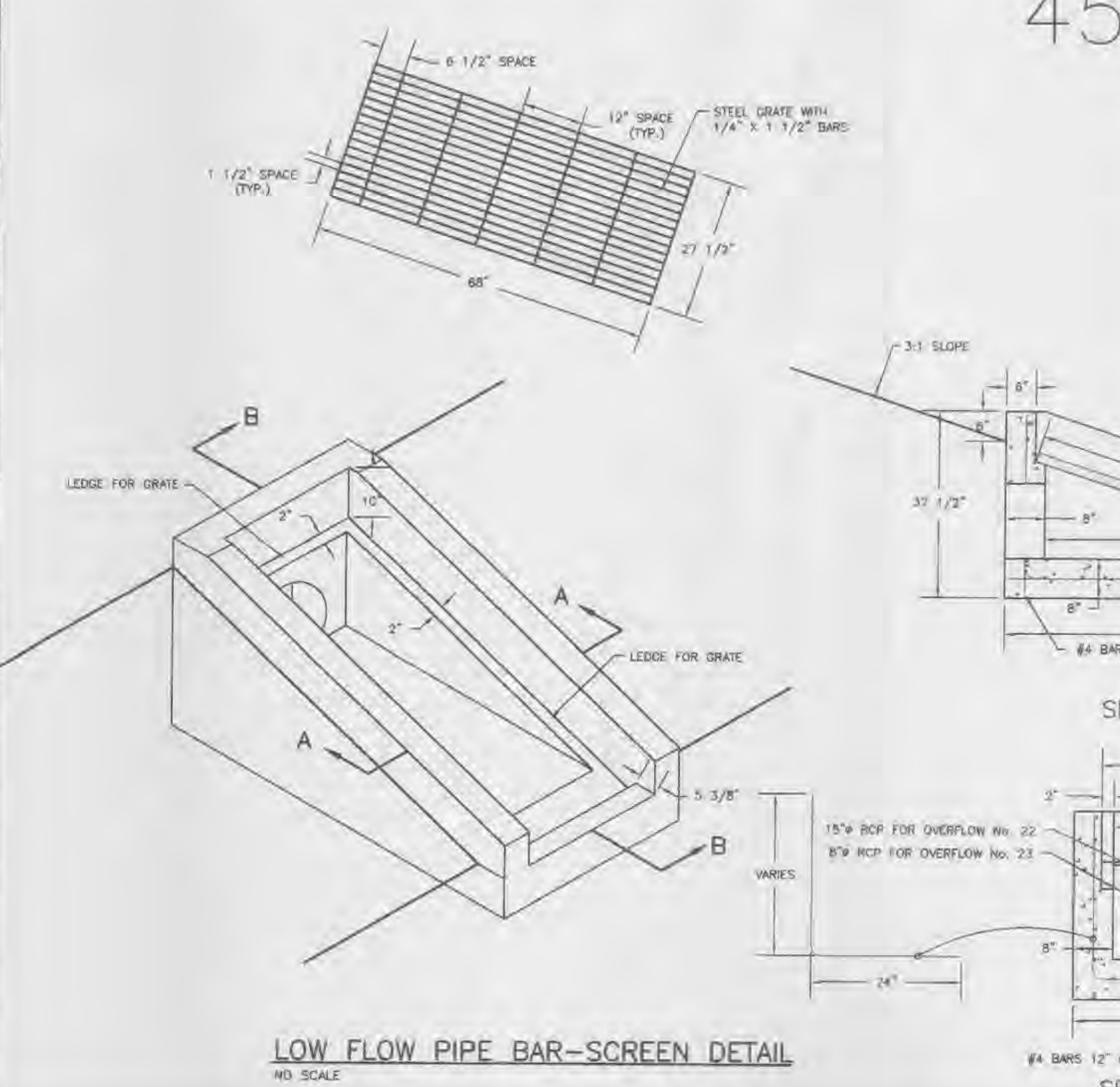
All DSHA rules & regulations established for the type of construction required by these plans shall be strictly followed (i.e. Trenching, Blasting, etc.)

TITLE	DATE	BY	APP'D
D.S.R. N.K.S.	JUNE 2002		
SCALE	AS SHOWN		
REVISION			

44

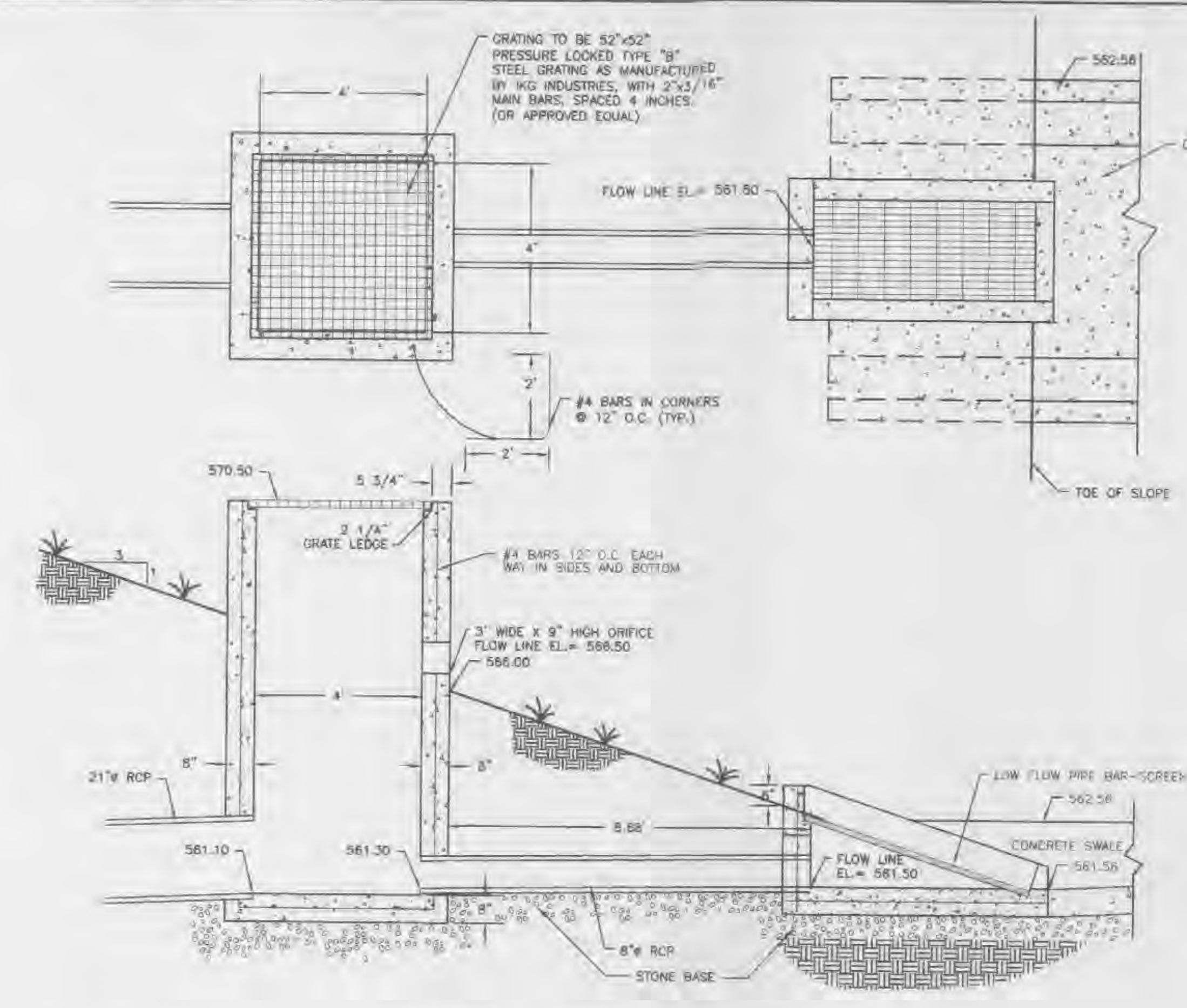


45



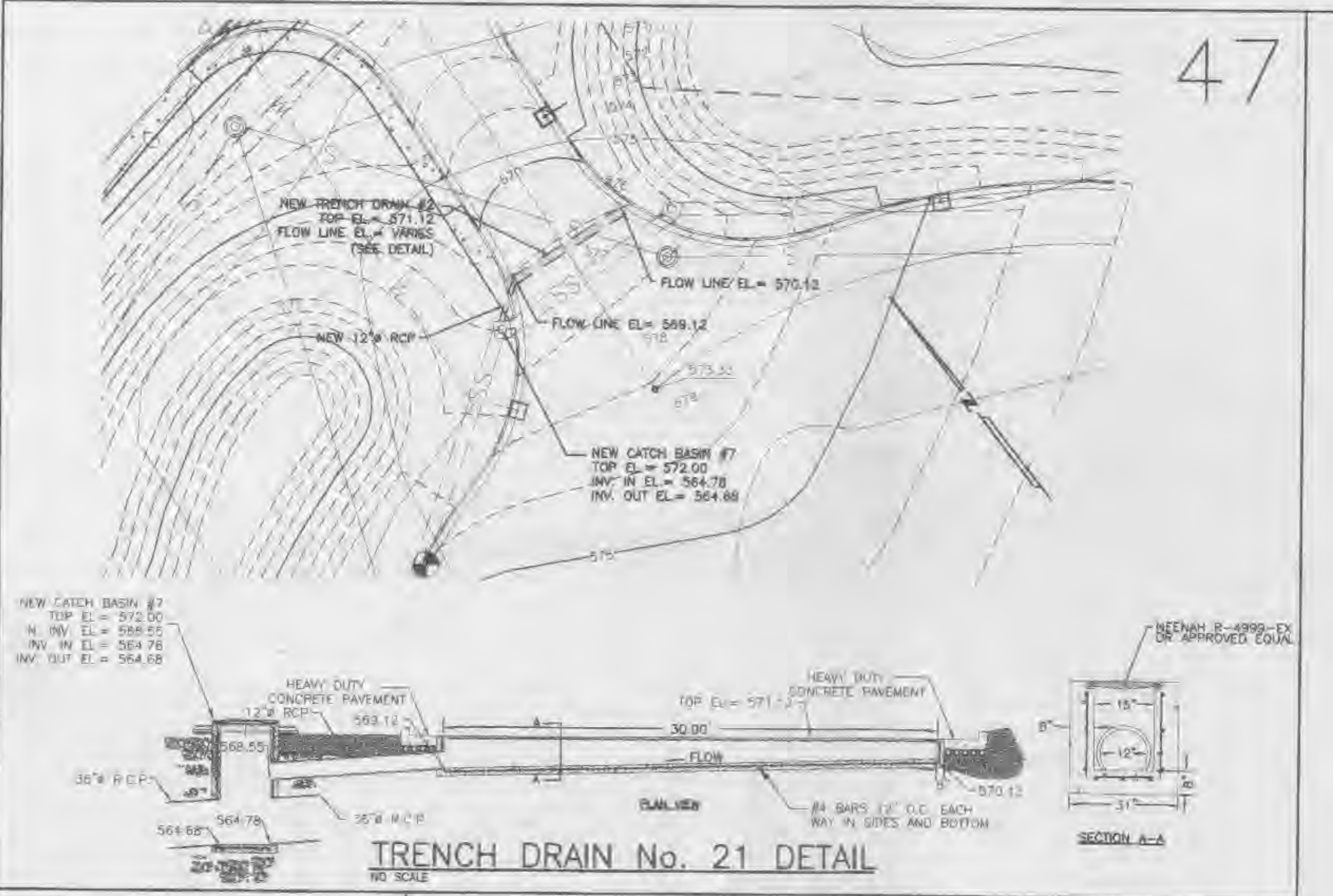
LOW FLOW PIPE BAR-SCREEN DETAIL
NO SCALE

46



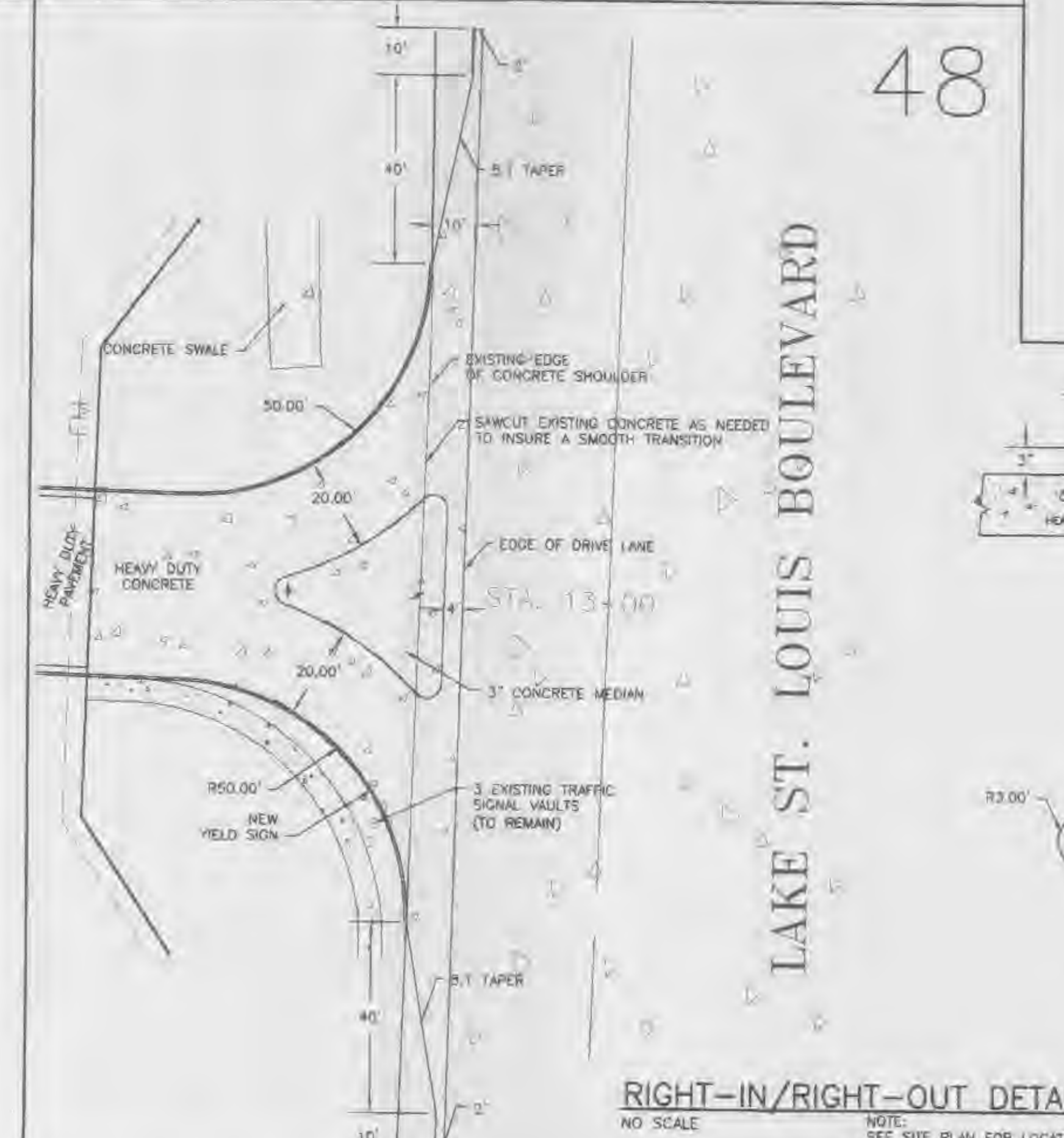
OVERFLOW STRUCTURE No. 23 DETAIL
NO SCALE

47



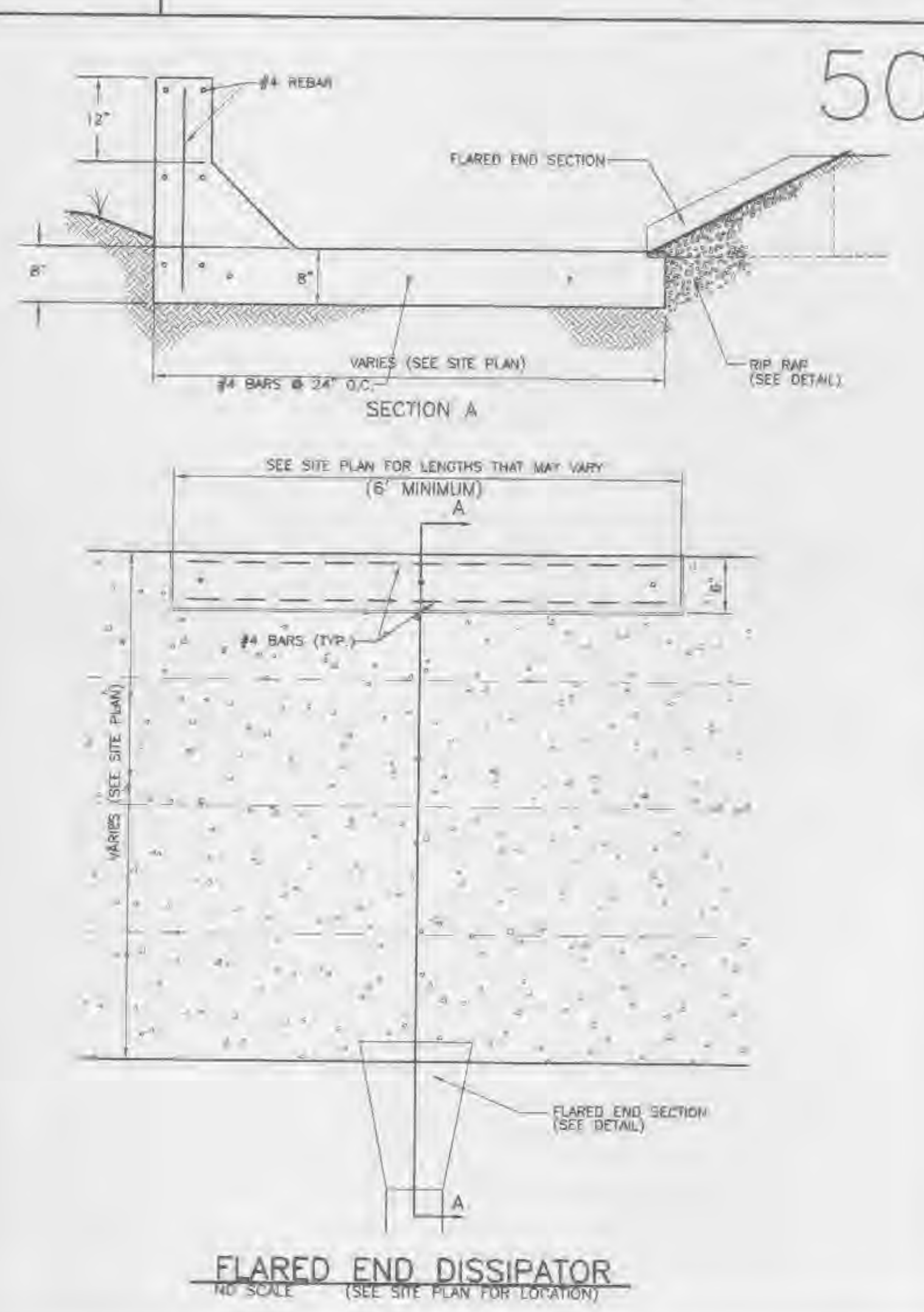
TRENCH DRAIN No. 21 DETAIL
NO SCALE

48



RIGHT-IN/RIGHT-OUT DETAIL
NO SCALE

50



FLARED END DISSIPATOR
NO SCALE

SHEET INDEX	
DETAIL 44	APRON & MODOT
DETAIL 45	LOW FLOW PIPE B
DETAIL 46	OVERFLOW STRUCT
DETAIL 47	TRENCH DRAIN No
DETAIL 48	RIGHT-IN/RIGHT-OUT
DETAIL 49	OVERFLOW STRUCT
DETAIL 50	FLARED END DISSIP
DETAIL 51	ISLAND DETAIL

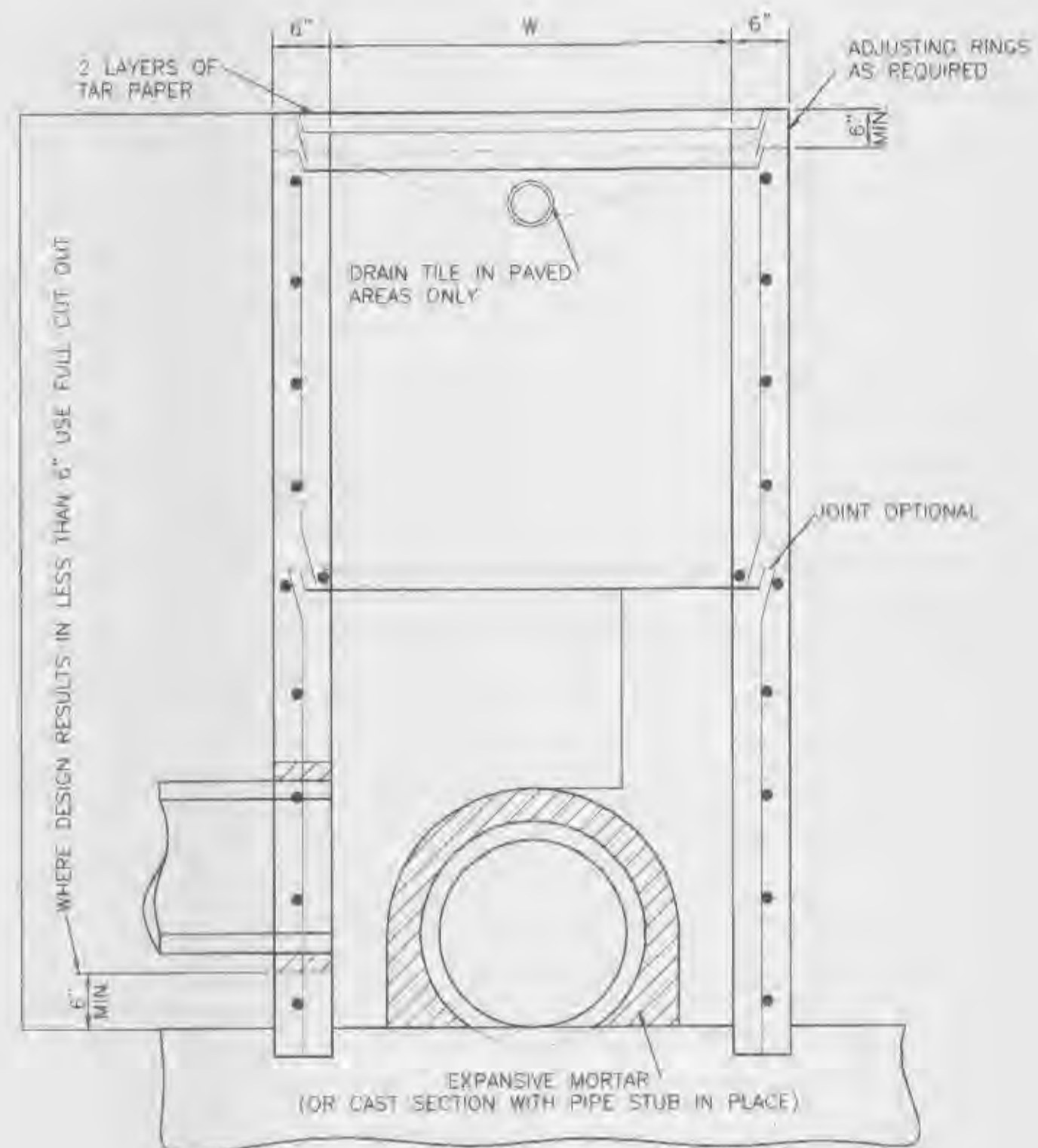
Daniel E. Moschmayer 17206
 Registered Professional Engineer
 State of Missouri
 for Buescher Frankenberg Associates, Inc.

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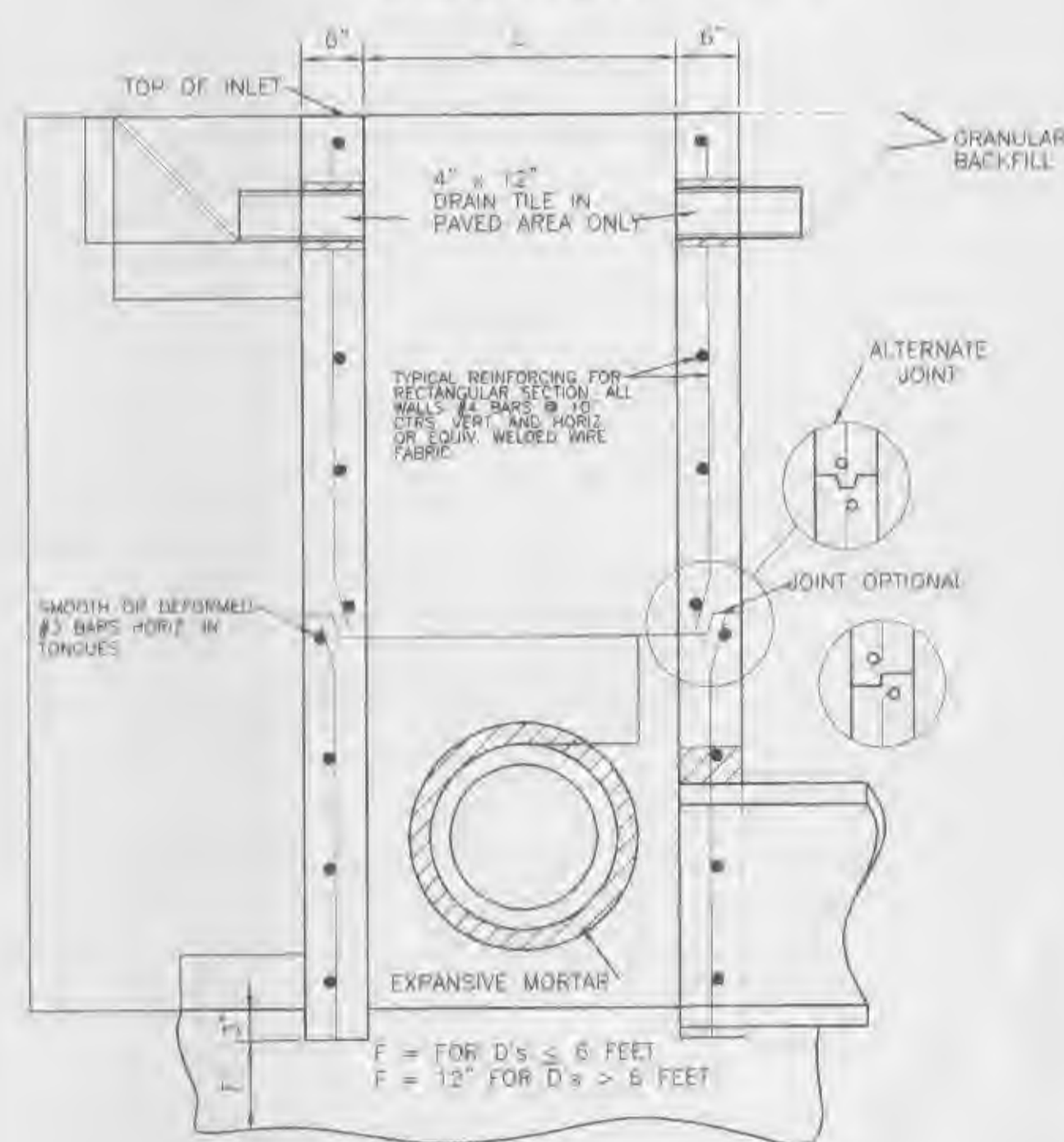
DETAIL SHEET
 SHOPPES AT LAKE
 FOR SCHNUCK MARK
 LAKE ST. LOUIS, ST. CHARLES, MO
 BUESCHER FRANKENBERG ASSOCIATES, INC.

1032 ELM STREET
 ST. LOUIS, MO 63102
 D.E.A., R.K.S. JUN 2002
 AS SHOWN

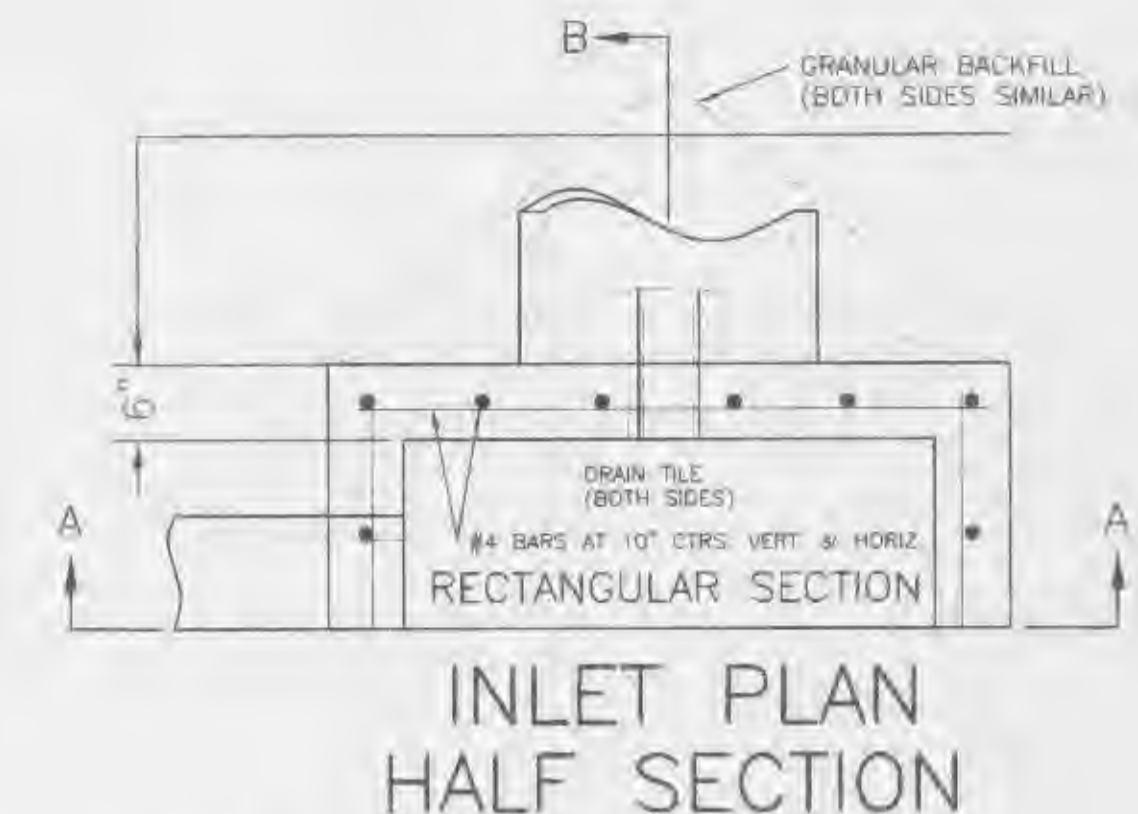
NO.	REVISION	BY	DATE	APP'D.



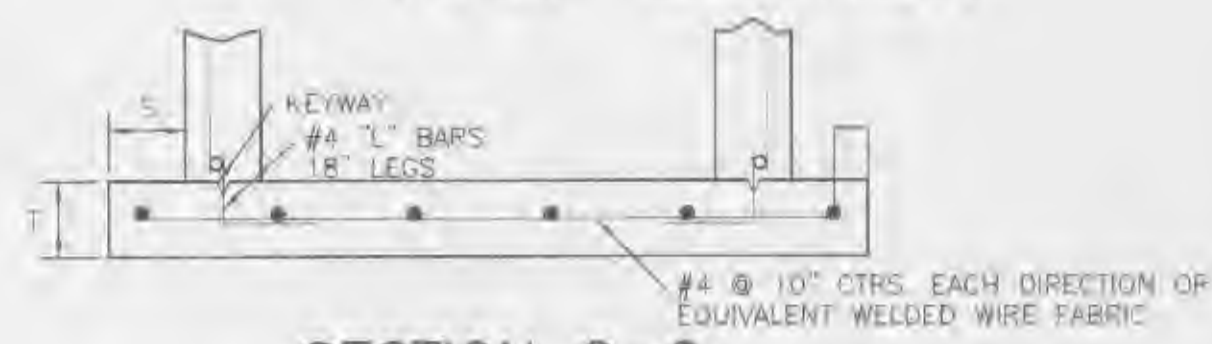
SECTION A-A



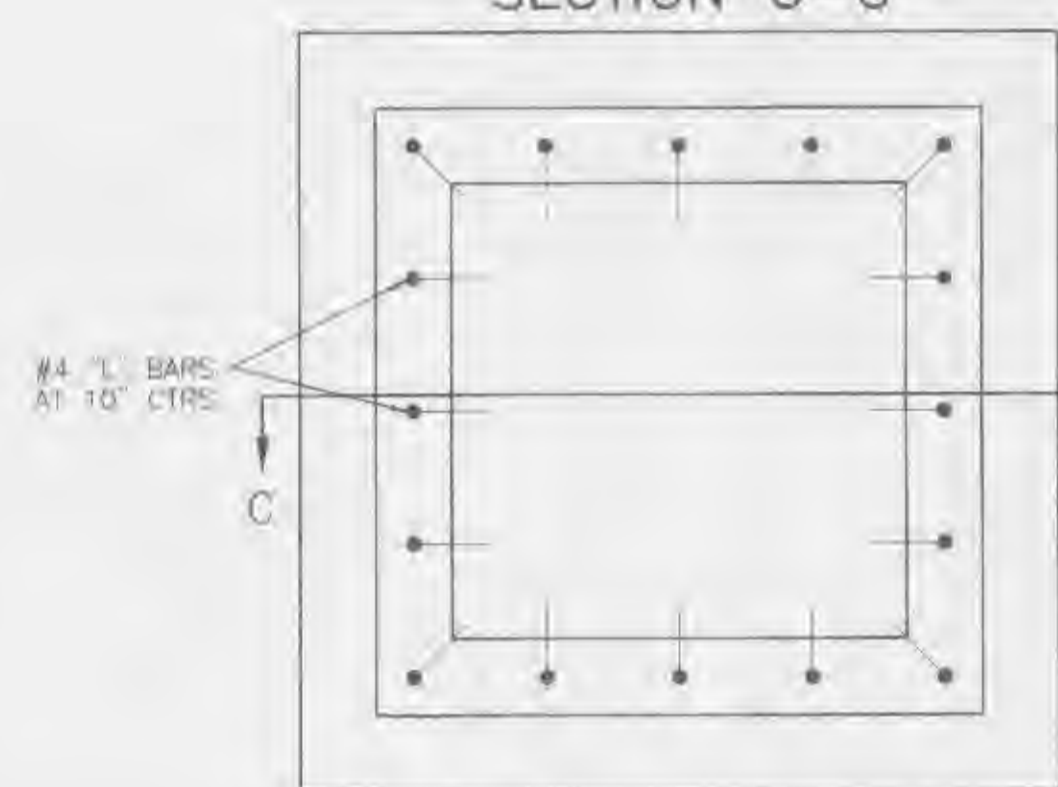
SECTION B-B



INLET PLAN HALF SECTION

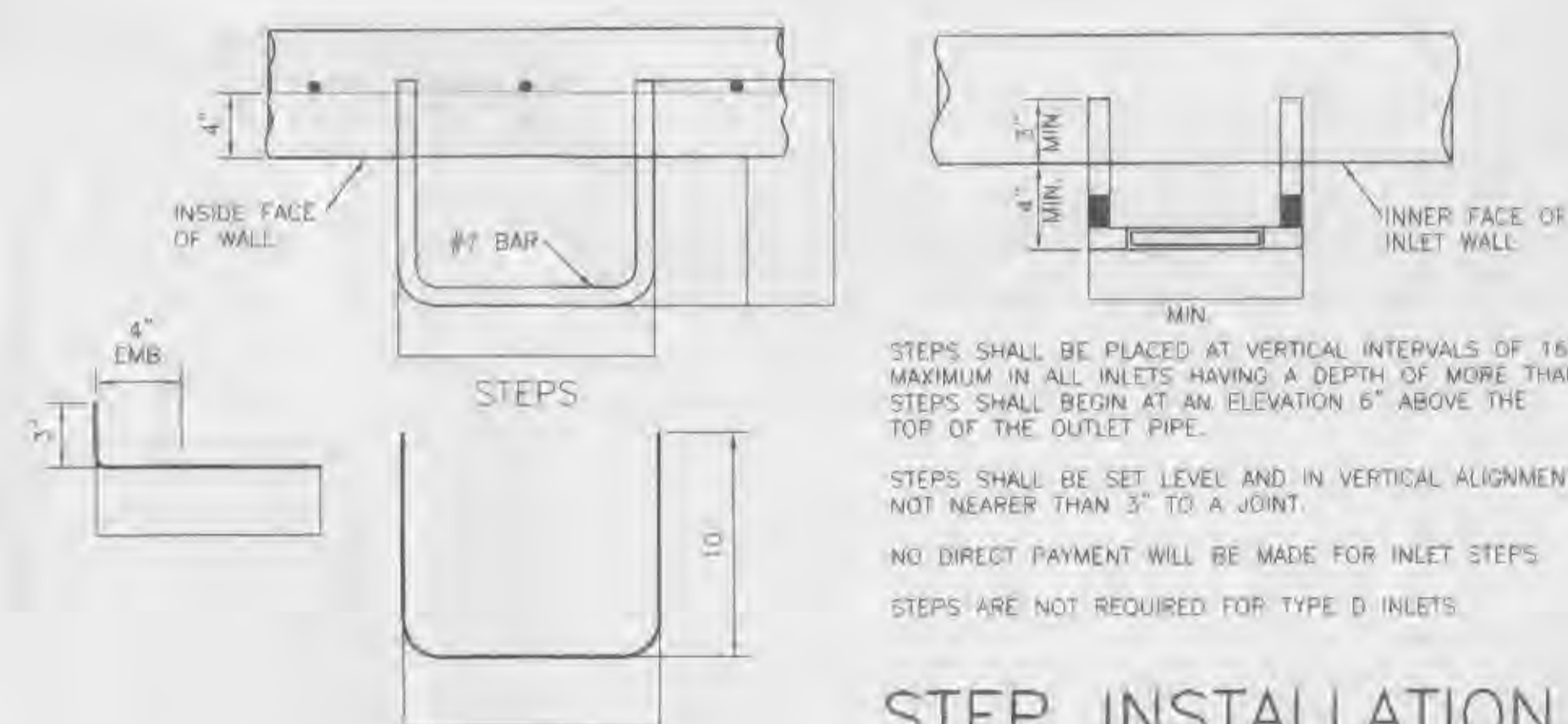


SECTION C-C



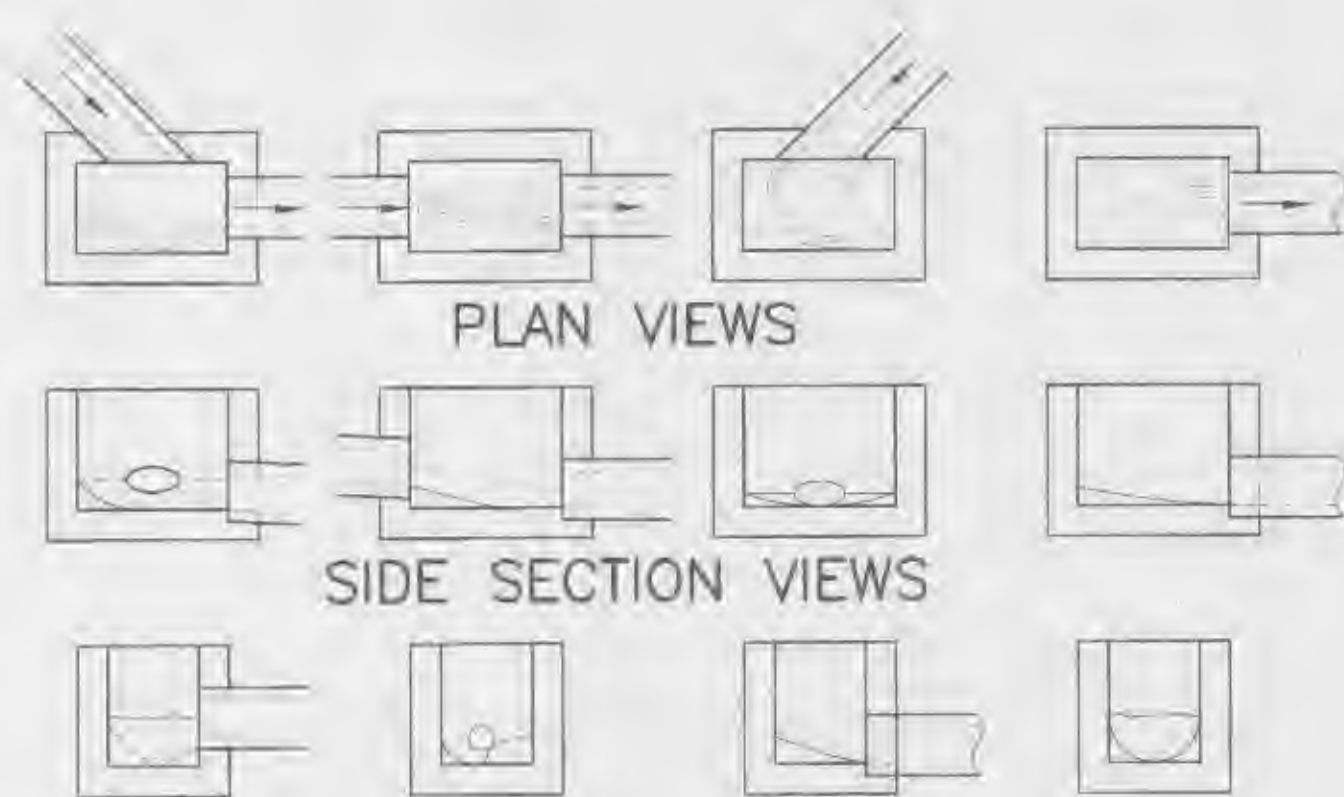
PRECAST FOUNDATION SLAB

S = 10" FOR DEPTHS ≤ 6 FEET AND 9" FOR DEPTHS > 6 FEET
 T = 6" FOR DEPTHS ≤ 6 FEET AND 9" FOR DEPTHS > 6 FEET
 FOUNDATION SLAB AND BASE SECTION MAY BE POURED MONOLITHIC OR SEPARATELY WITH A KEYWAY



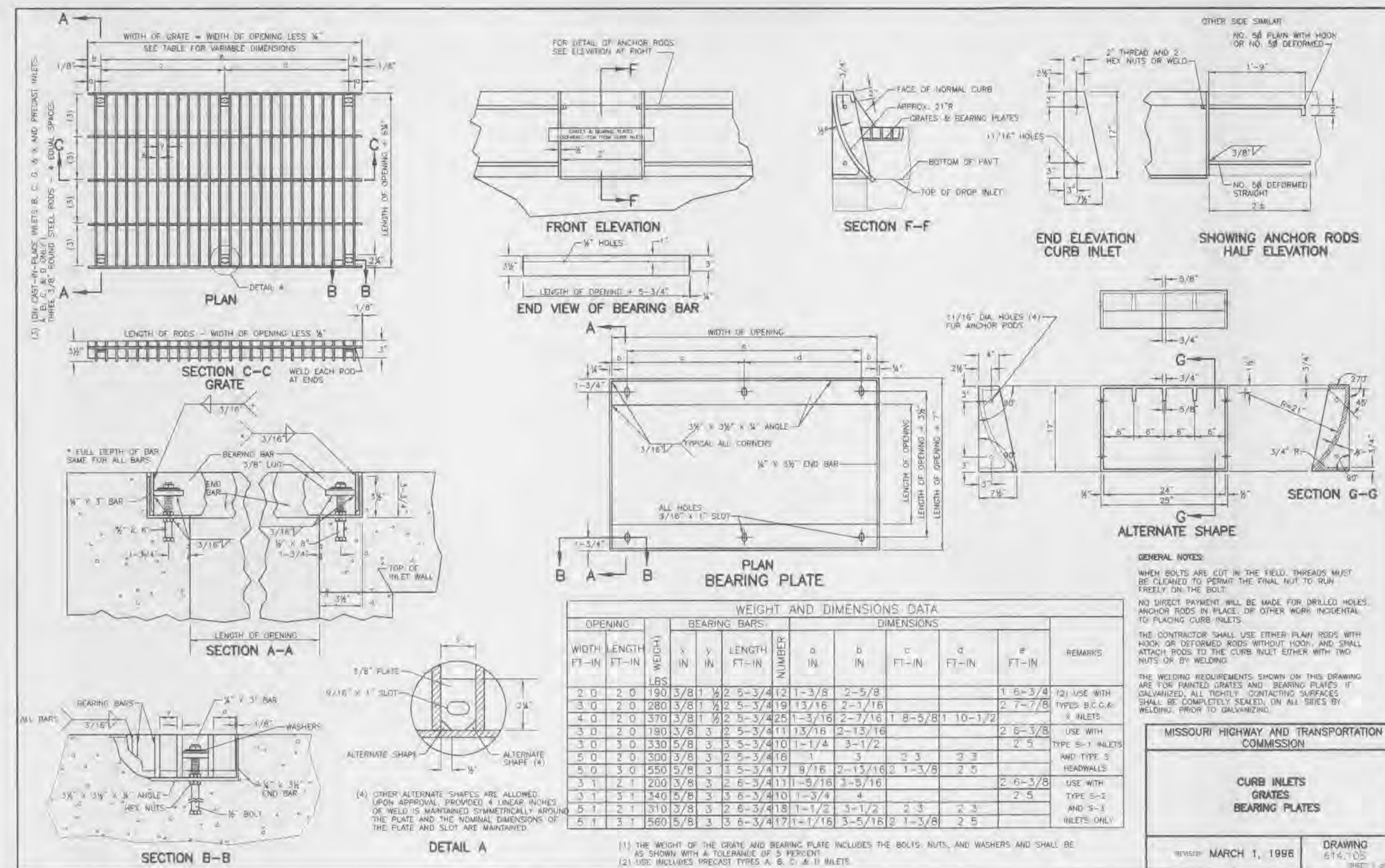
STEP INSTALLATION (OTHER THAN STEEL BAR)

S = BARS
 BENDING DIAGRAM
 STEEL STEP BAR



TYPICAL INVERTS

DROP INLET		
WIDTH FT	LENGTH FT	TYPE
3	3	A, B, C
3	4	D
3	5	E, S-1
3	6	S-2, S-3



WEIGHT AND DIMENSIONS DATA										
OPENING		BEARING BARS		DIMENSIONS						REMARKS
WIDTH FT-IN	LENGTH FT-IN	S IN	T IN	LENGTH FT-IN	a IN	b IN	c FT-IN	d FT-IN	# FT-IN	
2-0	2-0	180	3/8	1	2-5-3/4	12-1-3/8	2-5/8	1	6-3/4	(2) USE WITH TYPED B.C.C. & INLETS.
3-0	2-0	280	3/8	1	2-5-3/4	13-1/8	2-1/16	1	7-7/8	
4-0	2-0	370	3/8	1	2-5-3/4	13-7/16	2-7/16	1	8-5/8	
3-0	2-0	180	3/8	3	2-5-3/4	13-7/16	2-15/16	1	6-3/8	USE WITH TYPE S-1 INLETS AND TYPE S HEADWALLS.
3-0	3-0	230	5/8	3	3-5-3/4	10-1-1/4	3-1/2	2	3	
5-0	2-0	300	3/8	3	2-5-3/4	18	2-3	2	3	
5-0	3-0	450	5/8	3	3-5-3/4	17-8/16	2-15/16	2	3-3/8	
3-1	2-1	200	3/8	3	2-6-3/4	11-9/16	3-5/16	1	2-6-3/8	USE WITH TYPE S-2 AND S-3 INLETS ONLY.
3-1	3-1	240	5/8	3	3-6-3/4	11-3/4	4	2	2-5	
5-1	2-1	310	3/8	3	2-6-3/4	18-1-1/2	3-1/2	2	3	
5-1	3-1	360	5/8	3	3-6-3/4	17-1/16	3-5/16	2	1-3/8	

(1) THE WEIGHT OF THE GRATE AND BEARING PLATE INCLUDES THE BOLTS, NUTS, AND WASHERS AND SHALL BE AS SHOWN WITH A TOLERANCE OF 5 PERCENT.
 (2) USE INCLUDED PRECAST TYPES A, B, C, & D INLETS.

STATE OF MISSOURI
 DANIEL E. MASCHNER
 REGISTERED PROFESSIONAL ENGINEER
 NUMBER E-17206
 Date 7/26/02

PRELIMINARY DRAWING

ALL RIGHTS RESERVED

FOR REVIEW PURPOSES ONLY
 NOT TO BE USED FOR CONSTRUCTION

DROP INLET DETAIL
 (HS20 LOADING)
 MISSOURI HIGHWAY & TRANSPORTATION COMMISSION
 HIGHWAY 40-61 & LAKE ST. LOUIS BOULEVARD
 LAKE ST. LOUIS, ST. CHARLES COUNTY, MISSOURI

E-Mail: dfm@bfa.com Telephone: (636) 238-4751

BUESCHER FRANKENBERG ASSOCIATES, INC.

1035 ELM STREET WASHINGTON, MISSOURI 63090

DATE: D.A.R. DATE: JUNE, 2002 SHEET NO: 98-2384

SCALE: 1" = 30'

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Two working days prior to the start of any excavation on this site, contractor shall call 1-800-DIG-RITE for utility location information.

All OSHA rules & regulations established for the type of construction required by these plans shall be strictly followed (i.e. Trenching, Blasting, etc.)

GENERAL NOTE:
 THE CONCRETE FOR INVERTS SHALL BE PLACED AFTER COMPLETION OF THE DROP INLET BOX. NO DIRECT PAYMENT WILL BE MADE FOR FURNISHING OR PLACING INVERT CONCRETE.

MISSOURI HIGHWAY AND TRANSPORTATION COMMISSION	
PRECAST DROP INLET	
DATE: MARCH 1, 1996	DRAWING: 231.00

NO.	REVISION	BY	DATE	APP'D.