

LEGEND

EXISTING	PROPOSED
460 459 +820.15	460 459 621.25 (TOP OF CURB) (FINISH FAREMENT)
CONTOURS	
SPOT GRADE	
TREE LINE	
TREE	
BUSH	
STORM MANHOLE	
AREA INLET	
CURB INLET	
GRATED INLET	
FLARED END SECTION	
12" RCP	
STORM SEWER	
GRATED MANHOLE	
STORM DESIGNATOR	
DOWNSPOUT	
YARD DRAIN	
SWALE/SLOPE INDICATOR	
SANITARY MANHOLE	
SANITARY SEWER	
CLEAN OUT	
SANITARY DESIGNATOR	
UTILITY POLE	
GUIDE WIRE	
OVERHEAD UTILITY	
UNDERGROUND ELECTRIC	
ELECTRIC MARKER	
ELECTRIC METER	
ELECTRIC BOX	
ELECTRIC PULL BOX	
ELECTRIC TRANSFORMER	
ELECTRIC MANHOLE	
UNDERGROUND TELEPHONE	
FIBER OPTIC MARKER	
CABLE MARKER	
GAS LINE	
GAS VALVE	
GAS METER	
GAS MARKER	
WATER LINE	
WATER VALVE	
WATER METER	
FIRE HYDRANT	
SIGN	
MAIL BOX	
TEST HOLE	
LIGHT STANDARD	
FENCE	
BOLLARD	
RETAINING WALL	
CONCRETE PAVEMENT	
SILTATION FENCE	
AIR CONDITIONER	
FLAG POLE	
MONITORING WELL	
PARKING METER	
PLANTER	
SPRINKLER CONTROL BOX	
SPRINKLER	
SPRINKLER VALVE	
TRAFFIC CONTROL BOX	
TRAFFIC POLE	
YARD LIGHT	
GUARD RAIL	
PROPERTY LINE	
EASEMENT	
SETBACK	
INLET PROTECTION	
USE IN PLACE	(UIP)
TO BE REMOVED	(TBR)
ADJUST TO GRADE	(ATG)
TO BE REMOVED & RELOCATED	(TBR&R)
TYPICAL	(TYP)
NOT TO SCALE	N.T.S.
HIGH POINT IN GRADE	H.P.
TO BE ABANDONED	(TBA)

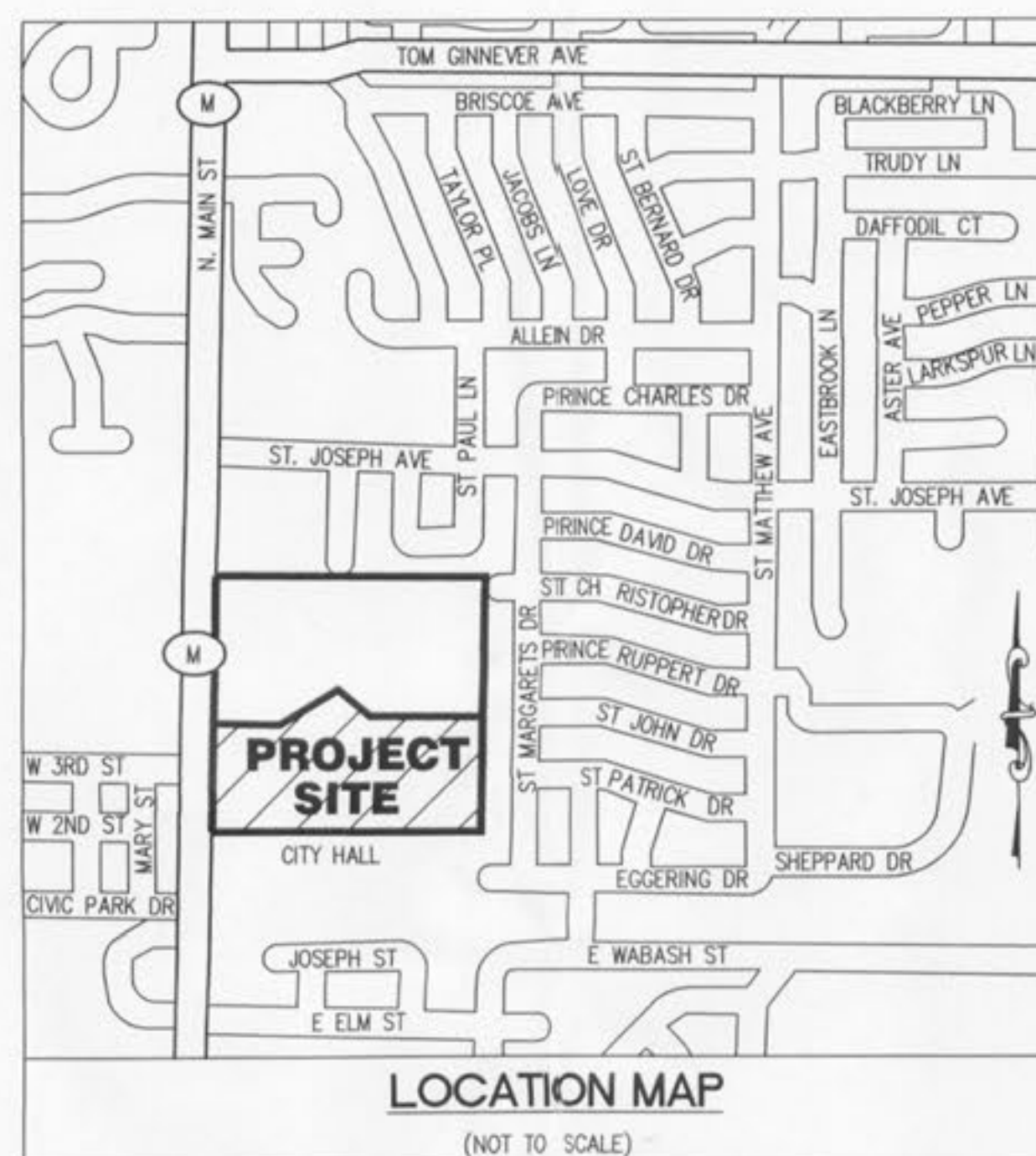
SITE BENCHMARK INFORMATION

U.S.G.S. BRASS DISK "F-149 1935" ELEVATION=542.804
DESCRIPTION: THE STATION IS A USC&GS BRASS VERTICAL MARK DISK STAMPED "F149 1935" SET IN A 6 INCH SQUARE CONCRETE MONUMENT, PROJECTING ABOUT 2.5 INCHES ABOVE THE GROUND SURFACE. THE AZIMUTH MARK IS A MO GRS ALUMINUM DISK STAMPED "F 149A 2000" SET IN A 12 INCH DIAMETER CONCRETE MONUMENT FLUSH WITH THE GROUND.

THE VILLAGE OF ST. MARY'S

A TRACT OF LAND BEING PART OF SECTION 21,
TOWNSHIP 47 NORTH, RANGE 3 EAST,
CITY OF O'FALLON, ST. CHARLES COUNTY, MISSOURI

SITE IMPROVEMENT PLANS - PHASE I



PERTINENT DATA:

OWNER	=	McEAGLE
SITE ADDRESS	=	204 NORTH MAIN STREET O'FALLON, MO 63366
SITE ACREAGE	=	42.57±
DISTURBED LAND	=	16.95±
EXISTING ZONING	=	"R-1"
PROPOSED ZONING	=	"MUTCD" (W/SENIOR OVERLAY)
PARCEL NUMBER	=	21850200300 & 21850200400
SCHOOL DISTRICT	=	FORT ZUMWALT
WUNNENBERG'S	=	PG. 38 GRID H-21
WATERSHED	=	PERUQUE CREEK/BELLEAU CREEK
FEMA MAP PANEL	=	29183C0230 E, DATE: AUGUST 2, 1996
ESTIMATED SANITARY FLOW	=	38,400 GPD

UTILITIES

SEWER SERVICE	=	O' FALLON SEWER DISTRICT 100 NORTH MAIN ST. O' FALLON, MO 63366 PH. 240-2000	GAS SERVICE	=	LACLEDE GAS COMPANY 1999 TRADE CENTER DRIVE EAST ST. PETERS, MO. 63376 PH. 636-978-2663 EXT.101
FIRE DISTRICT	=	O' FALLON FIRE PROTECTION DISTRICT 119 ELM ST. O' FALLON, MO 63366 PH. 636-272-3493	ELECTRIC SERVICE	=	AMEREN-UE ELECTRIC COMPANY ST. CHARLES DISTRICT 2100 BLUESTONE DR. ST. CHARLES, MO 63303 PH. 636-925-3235
WATER SERVICE	=	CITY OF O' FALLON 100 NORTH MAIN ST. O' FALLON, MO 63366 PH. 240-2000	PHONE SERVICE	=	CENTURY-TEL 1151 CENTURY-TEL DR. WENTZVILLE, MO 63385 PH. 636-332-7392
CABLE SERVICE	=	CHARTER COMMUNICATIONS 815 CHARTER COMMONS TOWN & COUNTRY, MO 63107			

THE OWNER/DEVELOPER ASSUMES FULL RESPONSIBILITY AS TO THE PERFORMANCE OF THE GRADING OPERATION AND THEY PROVIDE ASSURANCE THAT ALL OFF-SITE PROPERTIES AND COUNTY ROADS WILL BE ADEQUATELY PROTECTED.

OWNER/DEVELOPER SIGNATURE: *[Signature]* DATE: 8/17/2010

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Conditional
CITY OF O'FALLON
COMMUNITY DEVELOPMENT DEPARTMENT
ACCEPTED FOR CONSTRUCTION
BY: *[Signature]* DATE: 8-27-10
PROFESSIONAL ENGINEER'S SEAL
INDICATES RESPONSIBILITY FOR DESIGN



planning + engineering + surveying + landscape architecture
Cole and ASSOCIATES
INCORPORATED
10777 sunset office drive
st. charles, mo 63303
p. 314 984 9887 f. 314 984 0567

DESIGN/CALC BY: JKW
DRAWN BY: JKW
CHECKED BY: MEV
DRAWING SCALE:

DATE: 6/1/10

Job Number
07-0154

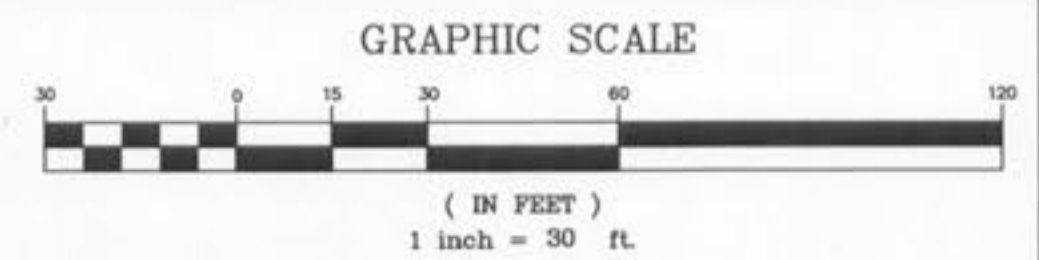
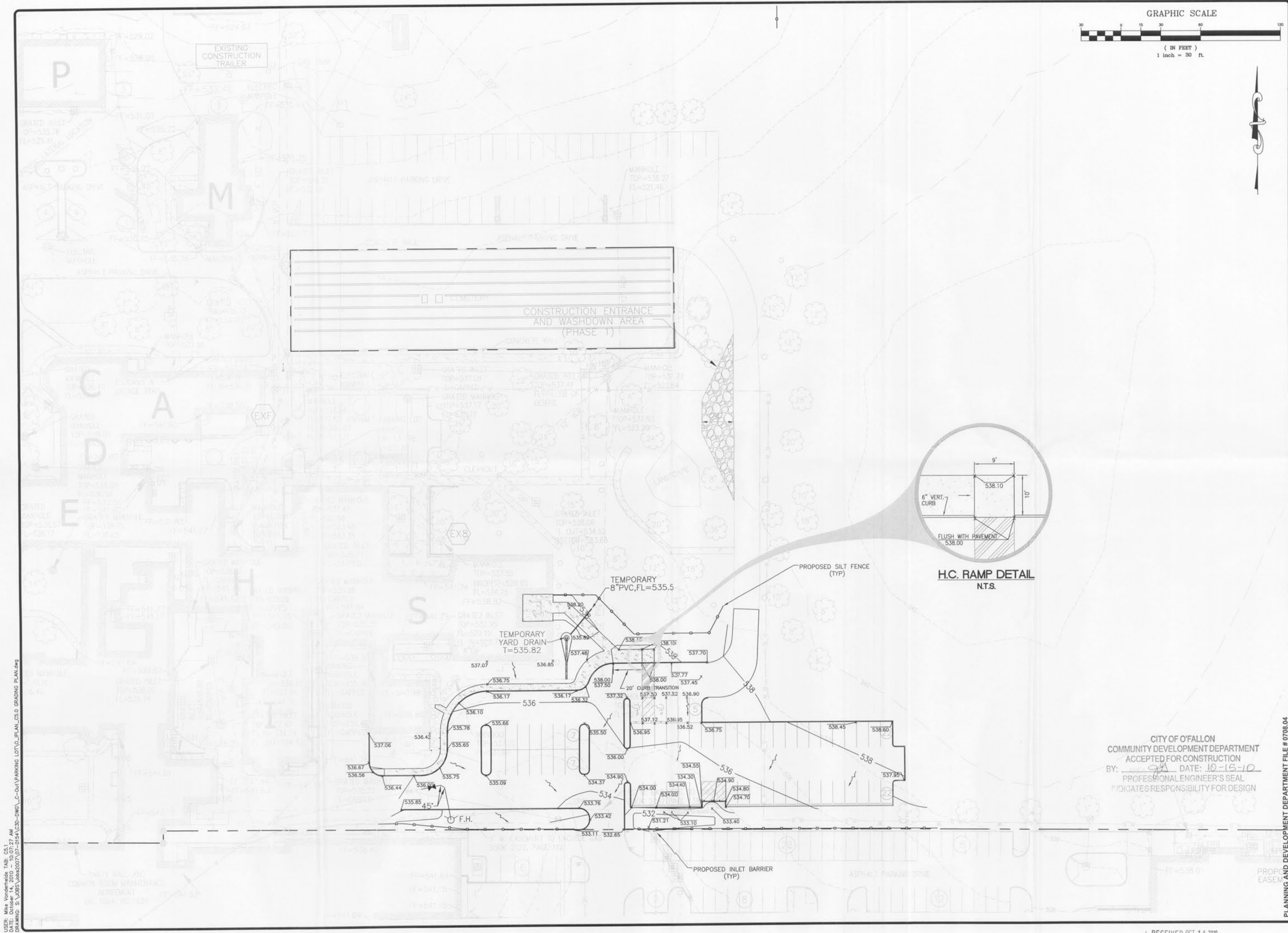
Sheet Number

C1.0

File

RECEIVED AUG 18 2010

USER: Mike Vanderhede TAB: C5.1
DRAWING: S:\Users\jacob2007\07-0154\CD-DWG\CD-04\PLAN\LOT_0_PLAN_C5.0 GRADING PLAN.dwg
DATE: 6/1/10



PLANNING AND DEVELOPMENT DEPARTMENT FILE # 0708.04	
CITY OF O'FALLON COMMUNITY DEVELOPMENT DEPARTMENT ACCEPTED FOR CONSTRUCTION BY: <u>SA</u> DATE: <u>10-15-10</u> PROFESSIONAL ENGINEER'S SEAL INDICATES RESPONSIBILITY FOR DESIGN	
DESIGN/CALC BY JKW	DATE 6/1/10
DRAWN BY JKW	Job Number 07-0154
CHECKED BY MEV	Sheet Number C5.1
DRAWING SCALE	
Cole and Associates Incorporated 10777 sunset office drive salem, OR 97307 p: 503 984 8887 f: 503 984 0597 1245 tom givener avenue o'fallon, MO 63366 p: 636 978 7508 f: 636 978 7509	
THE VILLAGE OF ST. MARYS IMPROVEMENT PLANS - PHASE 1 204 NORTH MAIN STREET O'FALLON, MO. 63366	
CIVIL ENGINEERS CORPORATE ENGINEERING FIRM NAME: E VENDOR/ID NUMBER: E-23077 PE NO: 0722077 DATE: 10/15/10	
DEVELOPER/OWNER: MCEAGLE PROPERTIES, LLC 1001 BOARDWALK SPRINGS PLACE O'FALLON MO 63366 CONTACT: ROB LOCHNER - PHONE (636) 581-8300	
3. UTILITY CONFLICTS/CITY COMMENTS 1. CITY COMMENTS 1. CITY COMMENTS 1. CITY COMMENTS NO. REVISION DESCRIPTION DATE	

GENERAL NOTES

1. ALL UTILITIES SHOWN HAVE BEEN LOCATED BY OTHERS FROM AVAILABLE RECORDS. THEIR LOCATION SHOULD BE CONSIDERED APPROXIMATE. THE CONTRACTOR HAS THE RESPONSIBILITY TO NOTIFY ALL UTILITY COMPANIES, PRIOR TO CONSTRUCTION, TO HAVE EXISTING UTILITIES FIELD LOCATED.
2. ALL ELEVATIONS ARE BASED ON U.S.C.S. DATUM.
3. ALL MATERIALS AND METHODS OF CONSTRUCTION TO MEET THE CURRENT STANDARDS AND SPECIFICATIONS AS REQUIRED BY THE CITY OF O'FALLON OR AS MODIFIED ON THESE PLANS.
4. ALL GRADED AREAS INDICATED SHALL BE PROTECTED FROM EROSION BY EROSION CONTROL DEVICES, SEEDING AND MULCHING AS INDICATED.
5. INSTALL SILTATION CONTROL PRIOR TO STARTING THE GRADING PER SILTATION SPECIFICATIONS. ADDITIONAL SILTATION CONTROL DEVICES MAY BE REQUIRED AS DIRECTED BY THE CITY OF O'FALLON.
6. ALL FILLS AND BACK FILLS SHALL BE MADE OF SELECTED EARTH MATERIALS, FREE FROM BROKEN MASONRY, ROCK, FROZEN EARTH, RUBBISH, ORGANIC MATERIAL AND DEBRIS.
7. GRADING CONTRACTOR SHALL KEEP EXISTING ROADWAYS CLEAN OF MUD AND DEBRIS AT ALL TIMES.
8. NO GRADE SHALL EXCEED 3:1 SLOPE, OR AS APPROVED BY THE SOILS ENGINEER.
9. ALL SLOPES TO BE STABILIZED IMMEDIATELY AFTER GRADING.
10. THE EROSION CONTROL PLAN SHOULD BE IMPLEMENTED BEFORE GRADING BEGINS.
11. EROSION CONTROL SHALL NOT BE LIMITED TO WHAT IS SHOWN ON THE PLAN.
12. WHATEVER MEANS NECESSARY SHALL BE TAKEN TO PREVENT SILTATION AND EROSION FROM ENTERING NATURAL STREAMS AND ADJACENT ROADWAYS, PROPERTIES, AND DITCHES.
13. TOPOGRAPHIC INFORMATION PROVIDED BY COLE & ASSOCIATES INC.
14. SEEDING SHOULD OCCUR AS SOON AS GRADING IS COMPLETE.
15. THE CITY OF O'FALLON RESERVES THE RIGHT TO REQUIRE ADDITIONAL EROSION CONTROL MEASURES IF THE PROPOSED MEASURES ARE DEEMED TO BE INADEQUATE OR NONEXISTENT.
16. TOPSOIL SHOULD BE STOCKPILED AND REUSED. PROPER EROSION CONTROL OF THESE STOCKPILES SHOULD INCLUDE SEEDING AND STRAWING AND OTHER MEANS OF SEDIMENT CONTROL SUCH AS SILTATION FENCE AND STRAW BALES.
17. THE SEDIMENT BASIN AND STRUCTURE SHALL BE INSPECTED AFTER EACH RAIN AND REPAIRS MADE AS NEEDED. SEDIMENT SHALL BE REMOVED AND THE BASIN RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE 1 SEDIMENT HAS ACCUMULATED TO THE DESIGN DEPTH OF THE BASIN. REMOVED SEDIMENT SHALL BE DEPOSITED 2 IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.
18. SEDIMENT BASIN CLEANOUT ELEVATION SHALL BE MARKED BY STAKES (MIN 3) PLACED IN THE BASIN MARKING THE CLEANOUT ELEVATION. STAKES SHALL BE REPLACED AS NEEDED TO BE INCLUDED IN SEDIMENT BASIN MAINTENANCE
19. AS DETERMINED THROUGH GRAPHIC PLOTTING ONLY, SUBJECT TRACT FALLS IN ZONE A. SPECIAL FLOOD HAZARD AREAS FUNDATED BY THE YEAR 2000 FLOOD INSURANCE RATE MAP FOR ST. CHARLES COUNTY, MISSOURI, PANEL 320 OF 525, MAP NUMBER 29183C0230 E, EFFECTIVE DATE OF AUGUST 2, 1996.
20. CONTRACTOR MUST NOTIFY THE OFF-SITE PROPERTY OWNERS A MINIMUM OF 48 HOURS BEFORE COMMENCING CONSTRUCTION ON THEIR PROPERTIES. ANY DISTURBED OFF-SITE AREAS MUST BE RESTORED TO THEIR PRE-IMPROVED CONDITION.
21. TRAFFIC CONTROL IS TO BE PER MODOT OR MUTCD WHICHEVER IS MOST STRINGENT.
22. ALL PROPOSED EASEMENTS SHALL BE SHOWN ON RECORD PLAT.
23. RIP-RAP SHOWN AT FLARED ENDS WILL BE EVALUATED IN THE FIELD AFTER INSTALLATION FOR EFFECTIVENESS AND FIELD MODIFIED, IF NECESSARY, TO REDUCE EROSION ON AND OFF-SITE.
24. BRICK SHALL NOT BE USED IN THE CONSTRUCTION OF STORM SEWER STRUCTURES.
25. ALL CONCRETE PIPES WILL BE INSTALLED WITH O-RING RUBBER TYPY GASKETS.
26. CONNECTIONS AT ALL STORM OR SANITARY SEWER STRUCTURES TO BE MADE WITH A-LOK JOINT OR EQUAL.
27. TREES, ORGANIC DEBRIS, RUBBLE, FOUNDATIONS AND OTHER DELETERIOUS MATERIAL SHALL BE REMOVED FROM THE SITE AND DISPOSED OF IN COMPLIANCE WITH ALL APPLICABLE LAWS AND REGULATIONS. LANDFILL TICKETS FOR SUCH DISPOSAL SHALL BE MAINTAINED ON FILE BY THE DEVELOPER. BURNING ON SITE SHALL BE ALLOWED ONLY BY PERMIT FROM THE LOCAL FIRE DISTRICT. IF A BURN PIT IS PROPOSED, THE LOCATION AND MITIGATION SHALL BE SHOWN ON THE GRADING PLANS AND DOCUMENTED BY THE SOILS ENGINEER.
28. ALL PROPOSED FENCING REQUIRES A SEPARATE PERMIT FROM THE PLANNING AND DEVELOPMENT DEPARTMENT.
29. ANY PROPOSED PAVILIONS, PLAYGROUNDS OR POOL AREAS WILL NEED A SEPARATE PERMIT FROM THE BUILDING DIVISION.
30. ALL ENTRANCE MONUMENT OR SUBDIVISION DIRECTIONAL SIGNAGE MUST HAVE THE LOCATIONS AND SIZES APPROVED AND PERMITTED SEPARATELY THROUGH THE PLANNING AND DEVELOPMENT DEPARTMENT.
31. THE DEVELOPER MUST SUPPLY THE CITY OF O'FALLON CONSTRUCTION INSPECTORS WITH SOIL REPORTS PRIOR TO AND DURING SITE SOIL TESTING. THE SOIL REPORT WILL BE REQUIRED TO CONTAIN THE FOLLOWING INFORMATION ON SOIL TEST CURVES (PROCTOR REPORTS) FOR PROJECTS WITHIN THE CITY:
 - *MAXIMUM DRY DENSITY.
 - *OPTIMUM MOISTURE CONTENT.
 - *MAXIMUM AND MINIMUM ALLOWABLE MOISTURE CONTENT.
 - *CURVE MUST BE PLOTTED TO SHOW DENSITY FROM A MINIMUM OF 90% COMPACTION AND ABOVE AS DETERMINED BY THE "MODIFIED AASHTO T-180 COMPACTION TEST" (A.S.T.M.-D-1157) OR FROM A MINIMUM OF 95% AS DETERMINED BY THE "STANDARD PROCTOR TEST AASHTO T-99, METHOD C" (A.S.T.M.-D698). PROCTOR TYPE MUST BE DESIGNATED ON DOCUMENT.
 - *CURVE MUST HAVE AT LEAST 5 DENSITY POINTS WITH MOISTURE CONTENT AND SAMPLE LOCATIONS LISTED ON DOCUMENT.
 - *SPECIFIC GRAVITY.
 - *NATURAL MOISTURE CONTENT.
 - *LIQUID LIMIT.
 - *PLASTIC LIMIT.
32. CITY APPROVAL OF THE CONSTRUCTION PLANS DOES NOT MEAN THAT SINGLE FAMILY AND TWO FAMILY DWELLING UNITS CAN BE CONSTRUCTED ON THE LOTS WITHOUT MEETING THE BUILDING SETBACKS AS REQUIRED BY THE ZONING CODE.
33. ALL UTILITIES SHALL BE LOCATED UNDERGROUND.
34. CONSTRUCTION WORK SHALL ONLY BE PERFORMED DURING THE FOLLOWING HOURS OF DAY:

10 OCTOBER 1 THRU MAY31	7 AM TO 7 PM
JUNE 1 THRU SEPTEMBER 30	6 AM TO 8 PM MONDAY-FRIDAY AND 7 AM TO 8 PM SATURDAY & SUNDAY

ANY CONSTRUCTION WORK TO BE DONE OUTSIDE OF THE SET HOURS REQUIRES PRIOR WRITTEN APPROVAL FROM THE CITY ADMINISTRATOR OR CITY ENGINEER (ORD. NO. 3429 1, 9-17-96)
35. ALL CONSTRUCTION METHODS AND PRACTICES TO CONFORM WITH OSHA STANDARDS.
36. ALL PAVING TO BE IN ACCORDANCE WITH ST. CHARLES COUNTY STANDARDS AND SPECIFICATIONS EXCEPT AS MODIFIED BY THE CITY OF O'FALLON ORDINANCES.
37. ALL FILL PLACED UNDER PROPOSED STORM AND SANITARY SEWER, PROPOSED ROADS, AND/OR PAVED AREAS SHALL BE COMPACTED TO 90% OF MAXIMUM DENSITY AS DETERMINED BY THE MODIFIED AASHTO T-180 COMPACTION TEST OR 95% OF MAXIMUM DENSITY AS DETERMINED BY THE STANDARD PROCTOR TEST AASHTO T-99. ALL FILL PLACED IN PROPOSED ROADS SHALL BE COMPACTED FROM THE BOTTOM OF THE FILL UP. ALL TESTS SHALL BE VERIFIED BY A SOILS ENGINEER CONCURRENT WITH GRADING AND BACKFILLING OPERATIONS. THE MOISTURE CONTENT OF THE SOIL IN FILL AREAS IS TO CORRESPOND TO THE COMPACTIVE EFFORT AS DEFINED BY THE STANDARD OR MODIFIED PROCTOR TEST. OPTIMUM MOISTURE CONTENT SHALL BE DETERMINED USING THE SAME TEST THAT WAS USED FOR COMPACTION. SOIL COMPACTION CURVES SHALL BE SUBMITTED TO THE CITY OF O'FALLON PRIOR TO THE PLACEMENT OF FILL. PROOF ROLLING MAY BE REQUIRED TO VERIFY SOIL STABILITY AT THE DISCRETION OF THE CITY OF O'FALLON.
38. SIDEWALKS, CURB RAMPS, RAMP, AND ACCESSIBLE PARKING SPACES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENTLY APPLICABLE "ACCESSIBILITY ACT ACCESSIBILITY GUIDELINES." (ADAAG) ALONG WITH THE REQUIRED GRADES, CONSTRUCTION MATERIAL, SPECIFICATIONS AND SIGNAGE. IF ANY CONFLICT OCCURS BETWEEN THE ABOVE INFORMATION AND THE PLANS, THE ADAAG GUIDELINES SHALL TAKE PRECEDENCE AND THE CONTRACTOR PRIOR TO ANY CONSTRUCTION SHALL NOTIFY THE PROJECT ENGINEER.
39. LIGHTING VALUES WILL BE REVIEWED ON SITE PRIOR TO THE FINAL OCCUPANCY INSPECTION. CORRECTIONS WILL NEED TO BE MADE IF NOT IN COMPLIANCE WITH CITY STANDARDS.
40. ALL SIGN POST, BACKS, AND BRACKET ARMS SHALL BE PAINTED BLACK USING CARBOLINE RUSTBOND PENETRATION SEALER SG AND CARBOLINE 133 HB PAINT (OR EQUIVALENT AS APPROVED BY CITY AND MODOT). SIGNS DESIGNATING STREET NAME SHALL BE ON THE OPPOSITE SIDE OF THE STREET FROM TRAFFIC CONTROL SIGNS.
41. THE DEVELOPER TO POST A FINANCIAL GUARANTEE OF PERFORMANCE (PER AN APPROVED COST ESTIMATE) AS REQUIRED BY ARTICLE 405 OF SUBDIVISION ORDINANCE.
42. DUE TO THE CHANGES YOU HAVE PROPOSED IN THE DEVELOPMENT OF "ST. MARY'S PROJECT" WHEN PHASE 1 IS COMPLETE YOU WILL NOT HAVE THE MINIMUM AMOUNT OF GROUND DEDICATED TO BOTH NON-RESIDENTIAL AND RESIDENTIAL USES TO MEET THE MINIMUM STANDARD REQUIRED BY THE MUTO. THEREFORE, WHEN PHASE 2 IS PROPOSED, IT MUST CONTAIN AT LEAST 8.5 ACRES OF GROUND THAT IS DEDICATED TO NON-RESIDENTIAL USES (THIS AMOUNT SHOULD COMPRISE 20% OF THE TOTAL PROJECTS 42.6 ACRES) IF THE USE ALLOCATION IS NOT CORRECTED, SUBSEQUENT PHASES WILL NOT BE APPROVED."

NON-SEDIMENT POLLUTION CONTROL NOTES

1. HANDLING AND DISPOSAL OF HAZARDOUS MATERIALS
 - DO: PREVENT SPILLS
 - USE PRODUCTS UP
 - FOLLOW LABEL DIRECTIONS FOR DISPOSAL
 - REMOVE LIDS FROM EMPTY BOTTLES AND CANS WHEN DISPOSING IN TRASH
 - RECYCLE WASTES WHENEVER POSSIBLE
 - DON'T: DON'T POUR WASTE INTO SEWERS OR WATERWAYS ON THE GROUND
 - DON'T POUR WASTE DOWN THE SINK, FLOOR DRAIN OR SEPTIC TANKS
 - DON'T BURY CHEMICALS OR CONTAINERS, OR DISPOSE OF THEM WITH CONSTRUCTION DEBRIS
 - DON'T BURN CHEMICALS OR CONTAINERS
 - DON'T MIX CHEMICALS TOGETHER
2. CONTAINERS SHALL BE PROVIDED FOR COLLECTION OF ALL WASTE MATERIAL INCLUDING CONSTRUCTION DEBRIS, TRASH, PETROLEUM PRODUCTS AND ANY HAZARDOUS MATERIALS TO BE USED ONSITE. ALL WASTE MATERIAL SHALL BE DISPOSED OF AT FACILITIES APPROVED FOR THAT MATERIAL.
3. NO WASTE MATERIALS SHALL BE BURIED ON-SITE.
4. MIXING, PUMPING, TRANSFERRING OR OTHERWISE HANDLING CONSTRUCTION CHEMICALS SUCH AS FERTILIZER, LIME, ASPHALT, CONCRETE DRYING COMPOUNDS, AND ALL OTHER POTENTIALLY HAZARDOUS MATERIALS SHALL BE PERFORMED IN AN AREA AWAY FROM ANY WATERCOURSE, DITCH OR STORM DRAIN.
5. EQUIPMENT FUELING AND MAINTENANCE, OIL CHANGING, ETC., SHALL BE PERFORMED ONLY IN AN AREA DESIGNATED FOR THAT PURPOSE.THE DESIGNATED AREA IS EQUIPPED FOR RECYCLING OIL AND CATCHING SPILLS.
6. CONCRETE WASH WATER SHALL NOT BE ALLOWED TO FLOW DIRECTLY TO STORM SEWERS, STREAMS, DITCHES, LAKES, ETC. WITHOUT BEING TREATED. A SUMP OR PIT SHALL BE CONSTRUCTED TO CONTAIN CONCRETE WASH WATER.
7. IF SUBSTANCES SUCH AS OIL, DIESEL FUEL, HYDRAULIC FLUID, ANTIFREEZE, ETC. ARE SPILLED, LEAKED, OR RELEASED ONTO SOIL, THE SOIL SHALL BE DUG UP AND DISPOSED OF AT A LICENSED SANITARY LANDFILL (NOT A CONSTRUCTION/DEMOLITION DEBRIS LANDFILL). SPILLS ON PAVEMENT SHALL BE ABSORBED WITH SAWDUST, KITTY LITTER OR PRODUCT DESIGNED FOR THAT PURPOSE AND DISPOSED OF AT A LICENSED SANITARY LANDFILL. HAZARDOUS OR INDUSTRIAL WASTES SUCH AS MOST SOLVENTS, GASOLINE, OIL-BASED PAINTS, AND CEMENT CURING COMPOUNDS REQUIRE SPECIAL HANDLING. THESE MATERIALS WILL BE REMOVED FROM THE SITE AND RECYCLED OR DISPOSED OF IN ACCORDANCE WITH MOONR REQUIREMENTS.
8. STATE LAW REQUIRES THE PARTY RESPONSIBLE FOR A PETROLEUM PRODUCT SPILL IN EXCESS OF 50 GALLONS TO REPORT THE SPILL TO MOONR (537-634-2436) AS SOON AS PRACTICAL AFTER DISCOVERY. FEDERAL LAW REQUIRES THE RESPONSIBLE PARTY TO REPORT ANY RELEASE OF OIL IF IT REACHES OR THREATENS A SEWER, LAKE, CREEK, STREAM, RIVER, GROUNDWATER, WETLAND, OR AREA, LIKE A ROAD DITCH, THAT DRAINS INTO ONE OF THE ABOVE

POLLUTION PREVENTION NOTES

- POLLUTION PREVENTION PROCEDURES
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TREE PROTECTION NOTES

1. THE PROTECTION AREA AROUND TREES SHALL INCLUDE ALL LAND WITHIN THE CANOPY DRIP LINE. THIS AREA SHALL REMAIN FREE OF ALL GRADING AND FILLING ACTIVITIES.
2. CONSTRUCTION SITE ACTIVITIES SUCH AS PARKING, MATERIAL STORAGE, SOIL STOCK PILING, AND CONCRETE WASHOUT SHALL NOT BE PERMITTED WITHIN TREE PROTECTION AREAS.
3. TREE PROTECTION AREAS SHALL BE CLEARLY IDENTIFIED PRIOR TO ANY LAND DISTURBANCE. METHODS THAT MAY BE USED INCLUDE SNOW FENCE, POLYETHYLENE, CHAIN LINK FENCE, OR CONSTRUCTION STAKES. DESIGNATED AREAS SHALL REMAIN CLEARLY MARKED UNTIL THE PROTECTED AREA HAS BEEN INSPECTED.
4. SIGNS SHALL BE USED TO DESIGNATE TREE PROTECTION AREAS. SIGNS ARE TO BE POSTED VISIBLY ON ALL SIDES OF THE PRESERVATION AREA. MINIMUM SIZE FOR THE SIGNS IS 24" X 36", PLACED 3' HIGH FROM GROUND TO BOTTOM OF SIGN AND SHOULD STATE THE FOLLOWING: TREE PROTECTION AREA-MACHINERY ACCESS AND DUMPING OR STORAGE OF MATERIALS AND EQUIPMENT PROHIBITED."
5. TREE PRESERVATION LIMITS AND SIGNAGE MUST BE INSPECTED AND APPROVED BY A CITY CONSTRUCTION INSPECTOR AT THE SITE, PRIOR TO PLAN APPROVAL AND THE COMMENCEMENT OF GRADING/CONSTRUCTION.

SILTATION CONTROL SPECIFICATIONS

SILTATION CONTROL GENERAL NOTES

1. INSTALLATION OF ALL PERIMETER SEDIMENT CONTROL SHALL BE IMPLEMENTED AS THE FIRST STEP OF GRADING AND WITHIN SEVEN (7) DAYS OF GRUBBING THE SITE.
2. INSPECTION OF SILTATION CONTROL DEVICES SHALL TAKE PLACE ONCE EVERY SEVEN DAYS AND WITHIN 24 HOURS OF ANY 0.5"/24 HOUR RAIN EVENT. ANY SILTATION CONTROL IN NEED OF REPAIR SHALL OCCUR IMMEDIATELY.
3. ALL SLOPES OR DRAINAGE CHANNELS, ONCE CONSTRUCTED TO FINAL GRADE, SHALL BE SEEDED AND MULCHED PER SPECIFICATIONS WITHIN SEVEN (14) DAYS.
4. SILT FENCES SHALL BE INSTALLED IMMEDIATELY AROUND EACH STORM SEWER STRUCTURE ONCE FINAL CONSTRUCTION OF EACH INDIVIDUAL STRUCTURE IS COMPLETE.
5. ALL SILTATION CONTROL DEVICES SHALL REMAIN IN PLACE UNTIL UPSLOPE AREAS HAVE BEEN PERMANENTLY STABILIZED.

SILTATION CONTROL SCHEDULE IMPLEMENTATION

1. PERIMETER SILTATION CONTROL AND CONSTRUCTION ENTRANCES TO BE INSTALLED.
2. BEGIN PLACING AGGREGATE BASE IN PARKING AREAS ONCE AREA HAS REACHED FINAL GRADE TO PREVENT EROSION.
3. PLACE SILT FENCE AROUND EACH STORM SEWER STRUCTURE AS IT IS COMPLETED.
4. IMMEDIATELY SEED AREAS AROUND REACHING FINAL GRADE THAT ARE TO BE PERMANENTLY SEEDED.

TEMPORARY ACCESS ROADS AND PARKING AREAS SPECIFICATIONS

1. TEMPORARY ROADS SHALL FOLLOW THE CONTOUR OF THE NATURAL TERRAIN TO THE EXTENT POSSIBLE. SLOPES SHOULD NOT EXCEED 10 PERCENT.
2. GRADES SHOULD BE SUFFICIENT TO PROVIDE DRAINAGE, BUT SHOULD NOT EXCEED 4 PERCENT.
3. ROADBEDS SHALL BE AT LEAST 20 FEET WIDE.
4. ALL CUTS AND FILLS SHALL BE 3:1 OR FLATTER TO THE EXTENT POSSIBLE.
5. DRAINAGE DITCHES SHALL BE PROVIDED AS NEEDED.
6. THE ROADBED OR PARKING SURFACE SHALL BE CLEARED OF ALL VEGETATION, ROOTS AND OTHER OBJECTIONABLE MATERIAL.
7. AN 6-INCH COURSE OF 2" MINUS AGGREGATE SHALL BE APPLIED IMMEDIATELY AFTER GRADING OR THE COMPLETION OF UTILITY INSTALLATION WITHIN THE RIGHT-OF-WAY. FILTER FABRIC (MIRAFI 500X) MAY BE APPLIED TO THE ROADBED FOR ADDITIONAL STABILITY IN ACCORDANCE WITH FABRIC MANUFACTURER'S SPECIFICATIONS.

VEGETATION

OFFSITE AREAS:

ALL ROADSIDE DITCHES, CUTS, FILLS AND DISTURBED AREAS ADJACENT TO PARKING AREAS AND ROADS SHALL BE STABILIZED WITH APPROPRIATE TEMPORARY OR PERMANENT VEGETATION ACCORDING TO THE APPLICABLE STANDARDS AND SPECIFICATIONS.

ONSITE:

REFER TO DRAWINGS FOR AREAS WHICH SHALL BE STABILIZED WITH APPROPRIATE TEMPORARY OR PERMANENT VEGETATION ACCORDING TO THE APPLICABLE STANDARDS AND SPECIFICATIONS.

SEEDING RATES

PERMANENT:

TALL FESCUE - 80 LBS./AC.
SMOOTH BROME - 100 LBS./AC.
COMBINED: FESCUE @ 40 LBS./AC. AND BROME @ 50 LBS./AC.

TEMPORARY:

WHEAT OR RYE - 150 LBS./AC. (3.5 LBS. PER 1,000 SQUARE FOOT)
OATS - 120 LBS./AC. (2.75 LBS. PER 1,000 SQUARE FOOT)

SEEDING PERIODS:

FESCUE OR BROME - MARCH 1 TO JUNE 1
AUGUST 1 TO OCTOBER 1
WHEAT OR RYE - MARCH 15 TO NOVEMBER 1
OATS - MARCH 15 TO SEPTEMBER 15

MULCH RATES: 100 LBS. PER 1,000 SQ. FEET (4,356 LBS. PER ACRE)

FERTILIZER RATES:

NITROGEN 30 LBS./AC.
PHOSPHATE 30 LBS./AC.
POTASSIUM 30 LBS./AC.
LIME 600 LBS./AC. ENM*

* ENM = EFFECTIVE NEUTRALIZING MATERIAL AS PER STATE EVALUATION OF QUARRIED ROCK.

MAINTENANCE

SEEDED AREAS ADJACENT TO THE ROADS AND PARKING AREAS SHOULD BE CHECKED PERIODICALLY TO ENSURE THAT A VIGOROUS STAND OF VEGETATION IS MAINTAINED. ROADSIDE DITCHES AND OTHER DRAINAGE STRUCTURES SHOULD BE CHECKED REGULARLY TO ENSURE THAT THEY DO NOT BECOME CLOGGED WITH SILT OR OTHER DEBRIS.

SHEET FLOW APPLICATIONS:

1. BALES SHALL BE PLACED IN A SINGLE ROW, LENGTHWISE ON THE CONTOUR, WITH BOTH ENDS OF ADJACENT BALES TIGHTLY ABUTTING ONE ANOTHER.
2. ALL BALES SHALL BE EITHER WIRE-BOUND OR STRING-TIED. STRAW BALES SHALL BE INSTALLED SO THAT BINDINGS ARE ORIENTED AROUND THE SIDES RATHER THAN ALONG THE TOPS AND BOTTOMS OF THE BALES (IN ORDER TO PREVENT DETERIORATION OF THE BINDINGS).
3. THE BARRIER SHALL BE ENTRENCHED AND BACKFILLED. A TRENCH SHALL BE EXCAVATED THE WIDTH OF A BALE AND THE LENGTH OF THE PROPOSED BARRIER TO A MINIMUM DEPTH OF 4 INCHES. AFTER THE BALES ARE STAKED AND CHINKED, THE EXCAVATED SOIL SHALL BE BACKFILLED AGAINST THE BARRIER. BACKFILL SOIL SHALL CONFORM TO THE GROUND LEVEL ON THE DOWNHILL AND SHALL BE BUILT UP TO 4 INCHES AGAINST THE UPHILL SIDE OF THE BARRIER (SEE DETAIL SHEET C10.10).
4. EACH BALE SHALL BE SECURELY ANCHORED BY AT LEAST TWO STAKES OR REBAR DRIVEN THROUGH THE BALE. THE FIRST STAKE IN EACH BALE SHALL BE DRIVEN TOWARD THE PREVIOUSLY LAID BALE TO FORCE THE BALES TOGETHER. STAKES OR REBAR SHALL BE DRIVEN DEEP ENOUGH INTO THE GROUND TO SECURELY ANCHOR THE BALES.
5. THE GAPS BETWEEN BALES SHALL BE CHINKED (FILLED BY WEDGING) WITH STRAW TO PREVENT WATER FROM ESCAPING BETWEEN THE BALES. (LOOSE STRAW SCATTERED OVER THE AREA IMMEDIATELY UPHILL FROM A STRAW BALE BARRIER TENDS TO INCREASE BARRIER EFFICIENCY).
6. INSPECTION SHALL BE FREQUENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
7. STRAW BALE BARRIERS SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFULNESS, BUT NOT BEFORE THE UPSLOPE AREAS HAVE BEEN PERMANENTLY STABILIZED.

CHANNEL FLOW APPLICATIONS:

1. BALES SHALL BE PLACED IN A SINGLE ROW, LENGTHWISE, ORIENTED PERPENDICULAR TO THE CONTOUR, WITH ENDS OF ADJACENT BALES TIGHTLY ABUTTING ONE ANOTHER.
2. THE REMAINING STEPS FOR INSTALLING A STRAW BALE BARRIER FOR SHEET FLOW APPLICATIONS APPLY HERE, WITH THE FOLLOWING ADDITION.
3. THE BARRIER SHALL BE EXTENDED TO SUCH A LENGTH THAT THE BOTTOMS OF THE END BALES ARE HIGHER IN ELEVATION THAN THE TOP OF THE LOWEST MIDDLE BALE TO ASSURE THAT SEDIMENT-LADEN RUNOFF WILL FLOW EITHER THROUGH OR OVER THE BARRIER BUT NOT AROUND IT.

GRADING/SEDIMENT & EROSION CONTROL NOTES

1. SEDIMENT AND EROSION CONTROL SHALL NOT BE LIMITED TO THE MEASURES SHOWN ON THE PLANS. THE CONTRACTOR, WITH THE APPROVAL OF THE CITY INSPECTOR, SHALL UTILIZE BEST MANAGEMENT PRACTICES TO PREVENT SEDIMENT FROM ENTERING ADJACENT PROPERTIES, ROADWAYS, STORM SEWERS, AND DRAINAGEWAYS.
2. ANY WELLS AND/OR SPRINGS WHICH MAY EXIST ON THIS PROPERTY SHOULD BE LOCATED AND SEALED IN A MANNER ACCEPTABLE TO CITY OF O'FALLON CONSTRUCTION INSPECTION DEPARTMENT.
3. ALL TRASH AND DEBRIS ON-SITE, EITHER EXISTING CONSTRUCTION, MUST BE REMOVED AND PROPERLY DISPOSED OF OFF-SITE.
4. DEBRIS AND FOUNDATION MATERIAL FROM ANY EXISTING ON-SITE BUILDING OR STRUCTURE WHICH IS SCHEDULED TO BE RAZED FOR THIS DEVELOPMENT MUST BE PROPERLY DISPOSED OF OFF-SITE.
5. SOFT SOILS IN THE BOTTOM AND BANKS OF ANY EXISTING OR FORMER POND SITES OR TRIBUTARIES OR ANY SEDIMENT BASINS OR TRAPS SHOULD BE REMOVED, SPREAD OUT AND PERMITTED TO DRY SUFFICIENTLY TO BE USED AS FILL. NONE OF THIS MATERIAL SHOULD BE PLACED IN PROPOSED PUBLIC RIGHT-OF-WAY LOCATIONS OR ON ANY STORM SEWER LOCATION.
6. A PRE-CONSTRUCTION CONFERENCE MUST BE SCHEDULED WITH THE CONSTRUCTION INSPECTION MANAGER PRIOR TO THE START OF EACH CONSTRUCTION PHASE OF LAND DISTURBANCE ACTIVITY. THE PERMITEE WILL BE RESPONSIBLE FOR NOTIFYING ALL CONTRACTORS, UTILITY CREWS, THE STORM WATER MANAGEMENT COORDINATOR FROM THE CITY OF O'FALLON, AND OTHER ENTITIES THAT WILL PERFORM WORK AT THE SITE TO BE IN ATTENDANCE.
7. PLEASE NOTIFY THE CONSTRUCTION INSPECTION DEPARTMENT A MINIMUM OF 48 HOURS PRIOR TO THE COMMENCEMENT OF CLEARING, GRADING, AND/OR PRIOR TO THE COMMENCEMENT OF CONSTRUCTION TO ARRANGE FOR AN INSPECTION OF THE SITE.
8. ALL EXCAVATIONS, GRADING OR FILLING SHALL HAVE FINISHED GRADE NOT TO EXCEED A 3:1 SLOPE, OR AS APPROVED BY THE SOILS ENGINEER.
9. TEMPORARY SILTATION CONTROL MEASURES (STRUCTURAL) SHALL BE MAINTAINED UNTIL VEGETATIVE COVER IS ESTABLISHED AT A SUFFICIENT DENSITY TO PROVIDE EROSION CONTROL ON THE SITE.
10. UPON COMPLETION OF STORM SEWERS, SILTATION CONTROL SHALL BE PROVIDED AROUND ALL OPEN SEWER INLETS AND SHALL REMAIN UNTIL THE DISTRIBUTED DRAINAGE AREAS HAVE BEEN PROPERLY STABILIZED.
11. WHEN NATURAL VEGETATION IS REMOVED DURING GRADING, VEGETATION, SHALL BE REESTABLISHED IN SUCH A DENSITY AS TO PREVENT EROSION.
12. WHEN GRADING OPERATIONS ARE COMPLETED OR SUSPENDED FOR MORE THAN 2 WEEKS, PERMANENT GRASS MUST BE ESTABLISHED AT SUFFICIENT DENSITY TO PROVIDE EROSION CONTROL ON THE SITE. BETWEEN PERMANENT GRASS SEEDING PERIODS, TEMPORARY COVER SHALL BE PROVIDED ACCORDING TO THE RECOMMENDATION OF THE CONSTRUCTION INSPECTION DEPARTMENT.
13. ALL FINISHED GRADES (AREAS NOT TO BE DISTURBED BY FUTURE IMPROVEMENT) IN EXCESS OF 20% SLOPES (5:1) SHALL BE MULCHED AND TACKED AT THE RATE OF 100 POUNDS PER 1,000 SQUARE FEET WHEN SEEDED.
14. ALL LOTS SHALL BE SEEDED AND MULCHED AT THE MINIMUM RATES DEFINED IN THE ST. CHARLES COUNTY SOIL AND WATER CONSERVATION DISTRICT GUIDELINES, OR SODEDED, BEFORE AN OCCUPANCY PERMIT MAY BE ISSUED, EXCEPT THAT A TEMPORARY OCCUPANCY PERMIT MAY BE ISSUED BY THE BUILDING DEPARTMENT IN CASES OF UNLDE HARDSHIP BECAUSE OF UNFAVORABLE GROUND CONDITIONS.
15. THE CONTRACTOR SHALL ASSUME COMPLETE RESPONSIBILITY FOR CONTROLLING ALL SILTATION AND EROSION OF THE PROJECT AREA. THE CONTRACTOR SHALL USE WHATEVER MEANS NECESSARY TO CONTROL EROSION AND SILTATION INCLUDING, BUT NOT LIMITED TO, STAKED STRAW BALES AND/OR SILTATION FABRIC FENCES (POSSIBLE METHODS OF CONTROL ARE DETAILED IN THE PLAN.) CONTROL SHALL COMMENCE WITH THE CLEARING OPERATIONS AND BE MAINTAINED THROUGHOUT THE PROJECT UNTIL ACCEPTANCE OF THE WORK BY THE OWNER AND/OR THE CITY OF O'FALLON. THE CONTRACTOR'S RESPONSIBILITIES INCLUDE ALL DESIGN AND IMPLEMENTATION AS REQUIRED TO PREVENT EROSION AND THE DEPOSITING OF SILT. THE OWNER AND/OR THE CITY OF O'FALLON MAY AT THEIR OPTION DIRECT THE CONTRACTOR IN HIS METHODS AS DEEMED FIT TO PROTECT PROPERTY AND IMPROVEMENTS. ANY DEPOSITING OF SILT OR MUD ON NEW OR EXISTING PAVEMENT SHALL BE REMOVED IMMEDIATELY. ANY DEPOSITING OF SILTS OR MUD IN NEW OR EXISTING STORM SEWERS OR SWALES SHALL BE REMOVED AFTER EACH RAIN AND AFFECTED AREAS CLEANED TO THE SATISFACTION OF THE OWNER AND/OR THE CITY OF O'FALLON.
16. ALL EROSION CONTROL SYSTEMS ARE INSPECTED AND NECESSARY CORRECTIONS MADE WITHIN 24 HOURS OF ANY RAINSTORM RESULTING IN ONE-HALF INCH OF RAIN OR MORE.
17. GRADING CONTRACTOR SHALL PROVIDE A WATER TRUCK AS NEEDED TO KEEP THE DUST CONTROL TO A MINIMUM.

STORM SEWER NOTES

- ALL STORM SEWER PIPES SHALL BE REINFORCED CONCRETE PIPE, CLASS II MINIMUM. ANY CONCRETE PIPE, CONDUIT, OR CULVERT BENEATH A STREET RIGHT-OF-WAY OR WITH REASONABLE PROBABILITY OF BEING SO LOCATED SHALL BE A MINIMUM OF CLASS III, BUT ALSO SHALL ACCOUNT FOR ALL VERTICAL LOADS. IN NO CASE SHALL THE DESIGN PROVIDE FOR LESS THAN HS-20 LOADING PER MSHTD. FOR OTHER LOCATIONS, THE MINIMUM DESIGN LIVE LOAD SHALL BE THE HS-10 LOADING.
- ALL STORM SEWER STRUCTURES WITHIN PROJECT SITE TO BE CONSTRUCTED IN ACCORDANCE WITH CITY OF O'FALLON STORMWATER MANAGEMENT CONSTRUCTION SPECIFICATIONS.
- ALL TRENCHES UNDER AREAS TO BE PAVED AND UNDER EXISTING PAVING SHALL BE GRANULARLY FILLED WITH 3/4" MINUS CRUSHED Limestone ONLY. BACK FILL SHALL BE PLACED IN ACCORDANCE WITH CITY OF O'FALLON STANDARD CONSTRUCTION SPECIFICATIONS.
- ALL TRENCH BACK FILLS UNDER PAVEMENT WITHIN THE PUBLIC RIGHT-OF-WAY SHALL BE GRANULAR BACKFILLED. TRENCH BACK FILLS UNDER PAVED AREAS, OUTSIDE OF PUBLIC RIGHT-OF-WAY SHALL BE GRANULAR BACK FILL ALSO IN LIEU OF THE COMPACTED EARTH BACKFILL.
- "O" RING RUBBER GASKETED WATER TIGHT JOINTS SHALL BE USED FOR ALL STORM SEWER REACHES ON THE STORM SEWER PROFILE SHEETS.
- A 5/8" TRASH BAR WILL BE INSTALLED AND CENTERED ACROSS ALL AREA INLET AND CURB INLET OPENINGS.
- RIP-RAP SHOWN AT FLARED ENDS WILL BE EVALUATED IN THE FIELD AFTER INSTALLATION FOR EFFECTIVENESS AND FIELD MODIFIED, IF NECESSARY, TO REDUCE EROSION ON AND OFF-SITE.
- BRICK SHALL NOT BE USED IN THE CONSTRUCTION OF STORM SEWER STRUCTURES.
- ALL CONCRETE PIPES WILL BE INSTALLED WITH O-RING RUBBER TYPE GASKETS.
- CONNECTIONS AT ALL STORM SEWER STRUCTURES TO BE MADE WITH A-LOK JOINT OR EQUAL.
- ALL STORM SEWER INLETS SHALL BE INSTALLED WITH A MARKER, BELOW IS THE RECOMMENDATIONS:
THE CITY WILL ALLOW THE FOLLOWING MARKERS AND ADHESIVE PROCEDURES ONLY AS SHOWN IN THE TABLE BELOW OR AN APPROVED EQUAL. FEEL AND STICK ADHESIVES PADS WILL NOT BE ALLOWED.

MANUFACTURER	SIZE	ADHESIVE	STYLE	MESSAGE (PART #)	WEBSITE
ACIP INTERNATIONAL	3/7/8"	EPOXY	CRYSTAL CAP	NO DUMPING WATERS (SD-W-CC)	WWW.ACIPINTERNATIONAL.COM
DAS MANUFACTURING, INC.	4"	EPOXY	STANDARD STYLE	NO DUMPING DRAINS TO STREAM (SD-W-CC)	WWW.DASMANUFACTURING.COM

- ALL TRENCHES SHALL BE PROPERLY BACKFILLED AND COMPACTED TO CONFORM TO CITY OF O'FALLON REQUIREMENTS BY EITHER MECHANICAL COMPACTION OR WATER JETTING.
JETTING: GRANULAR MATERIAL AND EARTH MATERIAL ASSOCIATED WITH NEW CONSTRUCTION OUTSIDE OF PAVEMENTS MAY BE JETTED, TAKING CARE TO AVOID DAMAGE TO NEWLY LAID SEWERS. THE JETTING SHALL BE PERFORMED WITH A PROBE ROUTE ON NOT GREATER THAN 7.5-FOOT CENTERS WITH THE JETTING PROBE CENTERED OVER AND PARALLEL WITH THE DIRECTION OF THE PIPE. TRENCH WIDTHS GREATER THAN 10-FOOT WILL REQUIRE MULTIPLE PROBES EVERY 7.5-FOOT CENTERS.
a. DEPTH: TRENCH BACKFILL LESS THAN 8-FOET IN DEPTH SHALL BE PROBED TO A DEPTH EXTENDING TO HALF THE DEPTH OF THE TRENCH BACKFILL, BUT NOT LESS THAN 3-FOET. TRENCH BACKFILL GREATER THAN 8-FOET IN DEPTH SHALL BE PROBED TO HALF THE DEPTH OF THE TRENCH BACKFILL BUT NOT GREATER THAN 8-FOET.
b. EQUIPMENT: THE JETTING PROBE SHALL BE A METAL PIPE WITH AN EXTERIOR DIAMETER OF 1.5 TO 2-INCHES.
c. METHOD: JETTING SHALL BE PERFORMED FROM THE LOW SURFACE TOPOGRAPHIC POINT AND PROCEED TOWARD THE HIGH POINT, AND FROM THE BOTTOM OF THE TRENCH BACKFILL TOWARDS THE SURFACE. THE FLOODING OF EACH JETTING PROBE SHALL BE STARTED SLOWLY ALLOWING SLOW SATURATION OF THE SOIL. WATER IS NOT ALLOWED TO FLOW AWAY FROM THE DITCH WITHOUT FIRST SATURATION THE TRENCH.
d. SURFACE BRIDGING: THE CONTRACTOR SHALL IDENTIFY THE LOCATIONS OF THE SURFACE BRIDGING (THE TENDENCY FOR THE UPPER BACKFILL CRUST TO ARCH OVER THE TRENCH RATHER THAN COLLAPSE AND CONSOLIDATE DURING THE JETTING PROCESS). THE CONTRACTOR SHALL BREAKDOWN THE BRIDGED AREAS USING AN APPROPRIATE METHOD SUCH AS WHEELS OR BUCKET OF A BACKHOE. WHEN THE SURFACE CRUST IS COLLAPSED, THE VOID SHALL BE BACKFILLED WITH THE SAME MATERIAL USED AS TRENCH BACKFILL AND RE-JETTED. COMPACTION OF THE MATERIALS WITHIN THE SUNKEN/JETTED AREA SHALL BE COMPACTED SUCH THAT NO FURTHER SURFACE SUBSIDENCE OCCURS.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ADJUST ALL STORM SEWER MANHOLES (THAT ARE AFFECTED BY THE DEVELOPMENT) TO FINISH GRADE, THIS SHOULD BE DONE BY USING GRADE RINGS.
- ALL STORM SEWER TRENCH BACK FILLS SHALL BE WATER JETTED. GRANULAR BACK FILL WILL BE USED UNDER PAVEMENT AREAS.
- GAS, WATER AND OTHER UNDERGROUND UTILITIES SHALL NOT CONFLICT WITH THE DEPTH OR HORIZONTAL LOCATION OF EXISTING OR PROPOSED STORM SEWERS.

SANITARY SEWER NOTES

- UNDERGROUND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE INFORMATION AND THEREFORE LOCATION SHALL BE CONSIDERED APPROXIMATE ONLY. THE VERIFICATION OF THE LOCATION OF ALL UNDERGROUND UTILITIES, EITHER SHOWN OR NOT SHOWN ON THESE PLANS, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE LOCATED PRIOR TO ANY GRADING OR CONSTRUCTION OF IMPROVEMENTS.
- GAS, WATER AND OTHER UNDERGROUND UTILITIES SHALL NOT CONFLICT WITH THE DEPTH OR HORIZONTAL LOCATION OF EXISTING OR PROPOSED SANITARY SEWERS, INCLUDING HOUSE LATERALS.
- ALL EXISTING SITE IMPROVEMENTS DISTURBED, DAMAGED, OR DESTROYED SHALL BE REPAIRED OR REPLACED TO CLOSELY MATCH PRE-CONSTRUCTION CONDITIONS.
- THE CONTRACTOR SHALL PREVENT ALL STORM, SURFACE WATER, MUD AND CONSTRUCTION DEBRIS FROM ENTERING THE EXISTING SANITARY SEWER SYSTEM.
- ALL SANITARY SEWER FLOW LINES AND TOPS BUILT WITHOUT ELEVATIONS FURNISHED BY THE ENGINEER WILL BE THE RESPONSIBILITY OF THE SEWER CONTRACTOR.
- ALL CONSTRUCTION AND MATERIALS SHALL CONFORM TO THE CURRENT CONSTRUCTION STANDARDS OF THE CITY OF O'FALLON.
- THE CITY OF O'FALLON SHALL BE NOTIFIED AT LEAST 48 HOURS PRIOR TO CONSTRUCTION FOR COORDINATION OF INSPECTION (636)-379-5561.
- ALL SANITARY SEWER BUILDING CONNECTIONS SHALL BE DESIGNED SO THAT THE MINIMUM VERTICAL DISTANCE FROM THE LOW POINT OF THE BASEMENT TO THE FLOW LINE OF A SANITARY SEWER AT THE CORRESPONDING BUILDING CONNECTION SHALL NOT BE LESS THAN THE DIAMETER OF THE PIPE PLUS THE VERTICAL DISTANCE OF 2-1/2 FEET.
- ALL SANITARY SEWER MANHOLES SHALL BE WATERPROOFED ON THE EXTERIOR IN ACCORDANCE WITH THE MISSOURI DEPT. OF NATURAL RESOURCES SPECIFICATION 10 CSR-8.129(7)(c).
- ALL PVC SANITARY SEWER PIPE SHALL CONFORM TO THE REQUIREMENTS OF ASTM D-3034 STANDARD SPECIFICATION FOR PVC POLYVINYL CHLORIDE SEWER PIPE, SDR-35 OR EQUAL, WITH "CLEAN" 1/2 INCH TO 1 INCH GRANULAR STONE BEDDING UNIFORMLY GRADED. THIS BEDDING SHALL EXTEND FROM 4 INCHES BELOW THE PIPE TO SPRING LINE OF PIPE. IMMEDIATE BACK FILL OVER PIPE SHALL CONSIST OF SAME SIZE "CLEAN" OR "MINUS" STONE FROM SPRING LINE OF PIPE TO 12 INCHES ABOVE THE TOP OF PIPE.
- ALL SANITARY SEWER TRENCH BACK FILLS SHALL BE WATER JETTED. GRANULAR BACK FILL WILL BE USED UNDER PAVEMENT AREAS.
- BRICK SHALL NOT BE USED ON SANITARY SEWER MANHOLES.
- EXISTING SANITARY SEWER SERVICE SHALL NOT BE INTERRUPTED.
- PRE-MANUFACTURED ADAPTERS SHALL BE USED AT ALL PVC TO DIP CONNECTIONS. RUBBER BOOT/MISSION-TYPE COUPLINGS WILL NOT BE ALLOWED.
- ANY PERMITS, LICENSES, EASEMENTS, OR APPROVALS REQUIRED TO WORK ON PUBLIC OR PRIVATE PROPERTIES OR ROADWAYS ARE THE RESPONSIBILITY OF THE DEVELOPER.
- "TYPE N" LOCK-TYPE COVER AND LOCKING DEVICE (LOCK-LUG) SHALL BE USED WHERE LOCK-TYPE COVERS ARE REQUIRED.
- ALL MANHOLES ARE 42" IN DIAMETER UNLESS NOTED OTHERWISE.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ADJUST ALL SANITARY SEWER MANHOLES (THAT ARE AFFECTED BY THE DEVELOPMENT) TO FINISH GRADE, THIS SHOULD BE DONE BY USING GRADE RINGS.
- SERVICE LATERALS SHALL BE 6" DIAMETER (MINIMUM).
- CONNECTIONS AT ALL SANITARY SEWER STRUCTURES TO BE MADE WITH A-LOK JOINT OR EQUAL.
- ALL SANITARY LATERALS AND SANITARY MAINS CROSSING UNDER ROADWAYS MUST HAVE THE PROPER ROCK BACKFILL AND TO REQUIRED COMPACTION.
- ALL TRENCHES SHALL BE PROPERLY BACKFILLED AND COMPACTED TO CONFORM TO CITY OF O'FALLON REQUIREMENTS BY EITHER MECHANICAL COMPACTION OR WATER JETTING.
JETTING: GRANULAR MATERIAL AND EARTH MATERIAL ASSOCIATED WITH NEW CONSTRUCTION OUTSIDE OF PAVEMENTS MAY BE JETTED, TAKING CARE TO AVOID DAMAGE TO NEWLY LAID SEWERS. THE JETTING SHALL BE PERFORMED WITH A PROBE ROUTE ON NOT GREATER THAN 7.5-FOOT CENTERS WITH THE JETTING PROBE CENTERED OVER AND PARALLEL WITH THE DIRECTION OF THE PIPE. TRENCH WIDTHS GREATER THAN 10-FOET WILL REQUIRE MULTIPLE PROBES EVERY 7.5-FOOT CENTERS.
a. DEPTH: TRENCH BACKFILL LESS THAN 8-FOET IN DEPTH SHALL BE PROBED TO A DEPTH EXTENDING TO HALF THE DEPTH OF THE TRENCH BACKFILL, BUT NOT LESS THAN 3-FOET. TRENCH BACKFILL GREATER THAN 8-FOET IN DEPTH SHALL BE PROBED TO HALF THE DEPTH OF THE TRENCH BACKFILL BUT NOT GREATER THAN 8-FOET.
b. EQUIPMENT: THE JETTING PROBE SHALL BE A METAL PIPE WITH AN EXTERIOR DIAMETER OF 1.5 TO 2-INCHES.
c. METHOD: JETTING SHALL BE PERFORMED FROM THE LOW SURFACE TOPOGRAPHIC POINT AND PROCEED TOWARD THE HIGH POINT, AND FROM THE BOTTOM OF THE TRENCH BACKFILL TOWARDS THE SURFACE. THE FLOODING OF EACH JETTING PROBE SHALL BE STARTED SLOWLY ALLOWING SLOW SATURATION OF THE SOIL. WATER IS NOT ALLOWED TO FLOW AWAY FROM THE DITCH WITHOUT FIRST SATURATION THE TRENCH.
d. SURFACE BRIDGING: THE CONTRACTOR SHALL IDENTIFY THE LOCATIONS OF THE SURFACE BRIDGING (THE TENDENCY FOR THE UPPER BACKFILL CRUST TO ARCH OVER THE TRENCH RATHER THAN COLLAPSE AND CONSOLIDATE DURING THE JETTING PROCESS). THE CONTRACTOR SHALL BREAKDOWN THE BRIDGED AREAS USING AN APPROPRIATE METHOD SUCH AS WHEELS OR BUCKET OF A BACKHOE. WHEN THE SURFACE CRUST IS COLLAPSED, THE VOID SHALL BE BACKFILLED WITH THE SAME MATERIAL USED AS TRENCH BACKFILL AND RE-JETTED. COMPACTION OF THE MATERIALS WITHIN THE SUNKEN/JETTED AREA SHALL BE COMPACTED SUCH THAT NO FURTHER SURFACE SUBSIDENCE OCCURS.
- ALL SANITARY SEWER PIPE SHALL BE SDR35 PVC PIPE OR EQUAL AND TESTING OF PIPE SHALL BE DONE IN ACCORDANCE TO THE REQUIREMENTS OF THE CITY OF O'FALLON.

WATER LINE NOTES

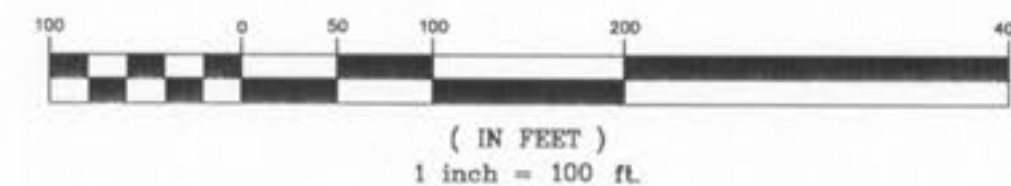
- ALL MATERIALS AND METHODS OF CONSTRUCTION FOR WATER MAINS TO MEET THE REQUIREMENTS OF THE CITY OF O'FALLON SPECIFICATIONS AND STANDARDS APPROVED BY MDNR UNDER REVIEW NO. 66196-04R.
- WATER MAINS SHALL BE POLY VINYL CHLORIDE (PVC) CLASS 200, SDR 21 PIPE CONFORMING TO A.S.T.M. SPECIFICATION 02241. THE PIPE SHALL BE PRESSURE RATED F OR A HYDROSTATIC WORKING PRESSURE OF 200 PSI AT 73.4 DEGREES F AND SHALL MEET ALL APPLICABLE REQUIREMENTS AS SET FORTH UNDER COMMERCIAL STANDARD (CS) 256-63.
- DUCTILE IRON PIPE MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH ALL THE REQUIREMENTS OF U.S.A. STANDARD A2151 (A.W.W.A. C-151-65). THE PIPE SHALL BE FURNISHED WITH MECHANICAL, PUSH ON, OR FLANGE JOINTS AS REQUIRED. THE INTERIOR SURFACE OF PIPE SHALL BE COATED WITH A CEMENT-MORTAR LINING IN ACCORDANCE WITH U.S.A. STANDARD A 214 (A.W.W.A. C 104). AFTER DRYING, THE CEMENT LINING SHALL BE SEAL COATED WITH SIMILAR A.W.W.A. APPROVED BITUMINOUS VARNISH. ALL FITTINGS AND BENDS SHALL BE CONSTRUCTION OF CAST OR DUCTILE IRON.
- WATER MAIN TRACER TAPE TO BE INSTALLED WITH ALL WATER MAIN AND SHALL CONSIST OF THREE INCH WIDE TAPE MADE OF BONDED LAYER PLASTIC WITH A METALLIC FOIL CORE. TAPE SHALL BE "TERRA TAPE D" AS MANUFACTURED BY THE GRIFFOLYN COMPANY OF HOUSTON, TEXAS, OR APPROVED EQUAL.
- WATER MAIN LOCATOR WIRE SHALL BE INSTALLED WITH ALL WATER MAIN, FITTINGS, AND VALVE INSTALLATION AND SHALL CONSIST OF A STANDARD ELECTRIC SERVICE WIRE, A SINGLE NO. 12 U.L. APPROVED COPPER WIRE OF THE SOLID OR STRAND TYPE WITH INSULATION FOR 600 VOLTS.
- ALL VALVES FOR EXTERIOR USE SHALL BE BURIED GATE VALVES WITH A VALVE BOX AND TWO INCH SQUARE NUT ATTACHMENT FOR MANUAL OPERATION WITH STANDARD VALVE WRENCH. GATE VALVES SHALL BE IRON BODIED WITH BRASS OR BRONZE MOUNTED DOUBLE DISC GATE. GATE VALVES SHALL BE OF THE NON-RISING STEM TYPE, OPENED BY TURNING COUNTER-CLOCKWISE. THE VALVE STEM SHALL HAVE DOUBLE "O" RING SEALS AND TERMINATE AT TOP WITH TWO INCH SQUARE NUT. GATE VALVE CONSTRUCTION AND MATERIALS SHALL CONFORM TO THE LATEST GOVERNING SPECIFICATIONS OF THE A.S.T.M. AND A.W.W.A. ALL GATE VALVES FOR USE SHALL BE "MUELLER" OR APPROVED EQUAL.
- VALVE BOXES FOR USE SHALL BE THE SCREW-TYPE, EXTENSION SLEEVE KIND. ALL BOXES SHALL BE FITTED WITH A RECESSED COVER HAVING THE WORD "WATER" CAST IN THE TOP. ALL VALVE ACCESS TUBES SHALL BE 6" SDR21 PVC.
- FIRE HYDRANTS SHALL BE MUELLER "CENTURION" OR THE AMERICAN DARLING MODEL NO. "B-B-B", HYDRANTS SHALL BE TRAFFIC MODEL TYPE WITH A WORKING PRESSURE OF 150 PSI IN FULL COMPLIANCE WITH A.W.W.A. STANDARD SPECIFICATIONS C-502 OF THE LATEST REVISION. HYDRANTS TO BE THREE-WAY WITH TWO 2 1/2 INCH CONNECTIONS AND ONE 4 1/2 INCH CONNECTION AND SHALL HAVE A 5 1/4" VALVE. A 6 INCH BARGE AND SHALL BE OF A BREAKAWAY DESIGN, FROST FREE WITH CHAIN, LEFT HAND OPEN, AND HAVE NATIONAL STANDARD THREADS.
- ALL FIRE HYDRANTS SHALL BE SET SO THE CENTER OF A HOSE NOZZLE SHALL NOT BE LESS THAN 18" ABOVE FINISHED GRADE. FIRE HYDRANT OUTLETS MUST FACE THE STREET OR ACCESS DRIVE.
- THERE SHALL BE NO OBSTRUCTIONS WITHIN 6 FEET OF ANY FIRE HYDRANT AND/OR FIRE DEPARTMENT CONNECTION TO AN AUTOMATIC SPRINKLER SYSTEM.
- FIRE HYDRANT SHALL BE IN ACCORDANCE WITH LOCAL FIRE PROTECTION DISTRICT.
- CONCRETE FOR THRUST BLOCKING AT BENDS, TEES, VALVES, HYDRANTS, ETC., SHALL BE 4,000 PSI COMPRESSIVE STRENGTH AT 28 DAYS.
- BEFORE WATER MAINS SHALL BE ACCEPTED AND PUT INTO SERVICE THEY SHALL BE TESTED. REQUIREMENTS ARE AS FOLLOWS:
CHLORINE TEST: TWO CONSECUTIVE DAYS
1ST DAY-50 PPM RESIDUAL
2ND DAY-30 PPM RESIDUAL
TEST POINTS TO BE DETERMINED BY WATER DISTRICT PERSONNEL
HYDROSTATIC TEST: 150 PSI FOR 2 HOURS. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CONFIRM THE STATE OF ALL VALVES WITHIN THE AFFECTED AREA OF THE TEST IN THE PRESENCE OF THE INSPECTOR WITNESSING THE TEST.
BACTERIA (COLIFORM) TEST: TWO CONSECUTIVE DAYS TEST POINTS TO BE DETERMINED BY WATER DISTRICT PERSONNEL. ALL TESTING WILL BE WITNESSED BY WATER DISTRICT PERSONNEL.
TRACER WIRE WILL BE TESTED FOR CONTINUITY IN THE PRESENCE OF WATER DISTRICT PERSONNEL.
ALL CONNECTIONS TO EXISTING WATER MAINS WILL BE WITNESSED AND INSPECTED BY WATER DISTRICT PERSONNEL.
- ALL WATER LINES AND SERVICE LINES SHALL HAVE A MINIMUM OF 42" OF COVERAGE.
- VERTICAL CLEARANCE BETWEEN SEWERS AND WATER MAINS SHALL BE A MINIMUM OF 2'-0".
- ALL MAINS SHALL BE LAID AT LEAST 10 FEET HORIZONTALLY FROM ANY EXISTING OR PROPOSED SANITARY SEWER MAIN. THE DISTANCES SHALL BE MEASURED EDGE TO EDGE. IN CASES WHERE IT IS NOT PRACTICAL, TO MAINTAIN A 10-FOOT SEPARATION, THE DEPARTMENT OF NATURAL RESOURCES MAY ALLOW DEVIATION, IF SUPPORTED BY DATA FROM THE DESIGN ENGINEER. SUCH DEVIATION MAY ALLOW INSTALLATION OF A WATER MAIN CLOSER TO A SANITARY SEWER, PROVIDED THAT THE WATER MAIN IS IN A SEPARATE TRENCH OR ON AN UNDISTURBED EARTH SHELVE LOCATED ON ONE SIDE OF THE SEWER AT SUCH AN ELEVATION THAT THE BOTTOM OF THE WATER MAIN IS AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER. WATER MAINS CROSSING SANITARY SEWERS SHALL BE LAID TO PROVIDED A MINIMUM VERTICAL DISTANCE OF 18 INCHES BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF THE SEWER. THIS SHALL BE THE CASE WHERE THE WATER MAIN IS EITHER ABOVE OR BELOW THE SEWER. THE CROSSING SHALL BE ARRANGED SO THAT THE SEWER JOINTS WILL BE EQUIDISTANT AND AS FAR A POSSIBLE FROM THE WATER JOINTS. WHERE A WATER MAIN CROSSES UNDER A SEWER, ADEQUATE STRUCTURAL SUPPORT SHALL BE PROVIDED FOR THE SEWER TO PREVENT DAMAGE TO THE WATER MAIN. WHEN IT IS IMPOSSIBLE TO OBTAIN PROPER HORIZONTAL AND VERTICAL SEPARATION, THE SANITARY SEWER SHALL BE DESIGNED AND CONSTRUCTED EQUAL TO WATER PIPES, AND SHALL BE PRESSURE TESTED TO ASSURE WATER TIGHTNESS PRIOR TO BACKFILLING. A 3-FOOT HORIZONTAL SEPARATION WILL BE PROVIDED FROM OTHER UNDERGROUND UTILITIES TO INCLUDE GAS, ELECTRIC, TELEPHONE, CABLE TV, ETC.
- CONTRACTOR TO COORDINATE WATER LINE UTILITY CROSSINGS WITH SEWER PROFILES.
- THE CITY OF O'FALLON SHALL BE NOTIFIED 48 HOURS PRIOR TO CONSTRUCTION.
- ALL TRENCHES SHALL BE PROPERLY BACKFILLED AND COMPACTED TO CONFORM TO CITY OF O'FALLON REQUIREMENTS BY EITHER MECHANICAL COMPACTION OR WATER JETTING.
JETTING: GRANULAR MATERIAL AND EARTH MATERIAL ASSOCIATED WITH NEW CONSTRUCTION OUTSIDE OF PAVEMENTS MAY BE JETTED, TAKING CARE TO AVOID DAMAGE TO NEWLY LAID SEWERS. THE JETTING SHALL BE PERFORMED WITH A PROBE ROUTE ON NOT GREATER THAN 7.5-FOOT CENTERS WITH THE JETTING PROBE CENTERED OVER AND PARALLEL WITH THE DIRECTION OF THE PIPE. TRENCH WIDTHS GREATER THAN 10-FOET WILL REQUIRE MULTIPLE PROBES EVERY 7.5-FOOT CENTERS.
a. DEPTH: TRENCH BACKFILL LESS THAN 8-FOET IN DEPTH SHALL BE PROBED TO A DEPTH EXTENDING TO HALF THE DEPTH OF THE TRENCH BACKFILL, BUT NOT LESS THAN 3-FOET. TRENCH BACKFILL GREATER THAN 8-FOET IN DEPTH SHALL BE PROBED TO HALF THE DEPTH OF THE TRENCH BACKFILL BUT NOT GREATER THAN 8-FOET.
b. EQUIPMENT: THE JETTING PROBE SHALL BE A METAL PIPE WITH AN EXTERIOR DIAMETER OF 1.5 TO 2-INCHES.
c. METHOD: JETTING SHALL BE PERFORMED FROM THE LOW SURFACE TOPOGRAPHIC POINT AND PROCEED TOWARD THE HIGH POINT, AND FROM THE BOTTOM OF THE TRENCH BACKFILL TOWARDS THE SURFACE. THE FLOODING OF EACH JETTING PROBE SHALL BE STARTED SLOWLY ALLOWING SLOW SATURATION OF THE SOIL. WATER IS NOT ALLOWED TO FLOW AWAY FROM THE DITCH WITHOUT FIRST SATURATION THE TRENCH.
d. SURFACE BRIDGING: THE CONTRACTOR SHALL IDENTIFY THE LOCATIONS OF THE SURFACE BRIDGING (THE TENDENCY FOR THE UPPER BACKFILL CRUST TO ARCH OVER THE TRENCH RATHER THAN COLLAPSE AND CONSOLIDATE DURING THE JETTING PROCESS). THE CONTRACTOR SHALL BREAKDOWN THE BRIDGED AREAS USING AN APPROPRIATE METHOD SUCH AS WHEELS OR BUCKET OF A BACKHOE. WHEN THE SURFACE CRUST IS COLLAPSED, THE VOID SHALL BE BACKFILLED WITH THE SAME MATERIAL USED AS TRENCH BACKFILL AND RE-JETTED. COMPACTION OF THE MATERIALS WITHIN THE SUNKEN/JETTED AREA SHALL BE COMPACTED SUCH THAT NO FURTHER SURFACE SUBSIDENCE OCCURS.
- WATER METERS ARE PLACED IN A DEDICATED EASEMENT OR HAVE THE LOCATION APPROVED BY CITY OF O'FALLON WATER RESOURCES PRIOR TO INCORPORATION INTO THE PLANS.
- BACKFLOW PREVENTER DEVICES WILL BE LOCATED WITHIN THE BUILDING.

This approval would be contingent upon the following:

- The traffic study that was received by the City on October 16, 2008, shall be reviewed by the City's traffic consultant. The study should address impacts to Main Street and the surrounding street network, confirm if acceleration/deceleration lanes are needed on Main Street for the entrance at Road A, provide traffic generation projections and ADT's for roadways (both internal and external), determine the entrance configuration of Road A at Main Street, signal at Road A and Main Street. The City will then review this information to determine if the roadways, entrances, intersections, etc. are acceptable. In addition, the study should provide recommendations for signal timing and interconnection along Main Street. (Include consideration to flashing yellow during the work week for Third Street signal.) The recommendations and conclusions of the traffic study and the review of the City's consultant shall be addressed on the Construction Site Plans.
- Due to their high visibility, the commercial buildings shall have facade treatments on all sides including the rear elevation. The rear elevations shall incorporate projections, recesses and offsets, as well as any other available architectural device, shall be employed to prevent building facades from being static and monolithic.
- Provide complete elevations for all four sides of each proposed office building. (The labels on the elevations shall match the labels used on the plans.)
- Following the path established by the main drive aisle, provide a cross access easement that runs north to south through outlot 1 (the lot containing commercial buildings 1 & 2) connecting the internal roadway to the existing commercial lot at the northwest corner of the development (fronting on Main St).
- The extension of Sonderen north from the proposed termination point at the Independent Living Villa intersection to the termination point east of the retail area shall be constructed in conjunction with Phase II. No occupancy permits for any buildings within Phase II will be granted until the Sonderen extension is complete and open to traffic. In addition, a letter of credit as reviewed and approved by the City Attorney shall be established for the future Sonderen connection in conjunction with Phase I approval as well as any infrastructure deemed necessary.
- A striped crosswalk shall be installed connecting the sidewalk on the south side of proposed "Street B", north of the villas, to the sidewalk on the north side of the road, south of the single family lots. At the intersection east of villa #7.
- Existing Sonderen (At Eggering) is offset from the proposed ROW. Please indicate the concept alignment for the roadway sheets C0.4 and C0.6 that will insure there is not a conflict with the proposed detention basin and provide traffic island control and striping for the transition in pavement width in this area.
- The sidewalk along the south side of the O'Fallon Sr Center needs to be extended around the east side of the center adjacent to Sonderen Rd and connected to the proposed sidewalk adjacent to the Sonderen extension.
- The sidewalks adjacent to Sonderen are to be built to a six (6) foot width as you move north along Sonderen.
- Detailed plans will need to be provided for the improvements along Main Street as part of the construction plan submittal.
- Move the detention basin in the south east corner of the site out of the 50 foot wide strip reserved for the Sonderen Roadway extension.
- The proposed parking lot on the west side of villa unit number 48 needs to be reconfigured so that the drive aisle is in the center and the parking spaces are on the perimeter.
- Provide documentation from the O'Fallon Fire Protection District that states that placing parking spaces on the north side of the existing cemetery will not impede fire trucks and equipment from accessing and extinguishing a fire on the north side of the St. Mary's building expansion.
- No parking will be allowed along any point of the Sonderen Extension within either Phase I or II. Therefore, Staff is concerned with the type of townhouse units proposed in Phase II. Visitor parking for this type of unit is typically in front of the unit. This area will need to be redesigned to accommodate off-street visitor parking.
- The improvements and widening of the access drive on the west side of City Hall and connecting the properties shall be constructed as part of Phase I.
- Provide evergreen trees on ten (10) foot center along the entire length of the east side of the Sonderen Extension where it abuts homes within the Forest Park subdivision.
- Remove cul-de-sac islands at the ends of the streets in the villas.
- Extend the sidewalk along right-of-way through parking lot west of villa unit 48, this sidewalk shall provide a connection to the continued care facility.
- Indicate how the existing buildings on the site will be served by trash and delivery vehicles and provide turning radius information.
- The lighting elements within the new signalized intersection shall be LEDs.
- The bike rack shown within the sidewalk in front of the southwest corner of commercial building three (3) shall be relocated.
- The developer and the City should formally document the cross access connections between the City Hall and subject property.
- The Construction Site Plans shall address the Municipal Code requirements listed below.

The approval is also conditional upon the following Municipal Code requirements being provided in conjunction with the Construction Site Plans:

- The parking calculations for the commercial buildings will need to be revised; the spec retail buildings shall be parked at a rate of 5.5 spaces per 1,000 square feet of gross floor area. Should you choose to park the commercial building at a rate other than this, you must support your recommendation with an "Alternative Parking Study" as required by code and approved by the Planning and Zoning Commission.
- Provide street name approval for all of the proposed roadways to be constructed in Phase I.
- In conjunction with the Record Plat, a complete listing of Covenants, Codes, and Restrictions shall be submitted to the City for review and approval. City of O'Fallon review criteria is located in the Subdivision Code.
- All retention basins shall meet the minimum depth requirements at the time of initial occupancy of Phase I and shall be required to escrow for the silt clean out until the site development is 95% occupied in Phase II.
- Provide easements for the wet retention basins, a 20 foot wide access easement from public right of way to the basin; also, call out the high water mark in all detention basins; all wet detention basins shall be a minimum depth of ten (10) feet.
- Water line hydraulics will be required with construction plans.
- Align handicap ramps to provide a shorter roadway crossing. In many locations, this will require the construction of two HC ramps on the same corner. The HC ramps should not be aligned where as to direct pedestrians, especially those who are visually impaired, into the middle of intersections.
- The proposed streets within the independent living villa portion of the development shall only be allowed to remain private if they are built to City standards. In addition, signage shall be provided at each subdivision entrance that reads: "Private Streets Maintained by Property Owners" to be installed in a manner compliant with City Code. These roads shall remain maintained privately for perpetuity.



LEGEND

-  PAVEMENT TO BE REMOVED
-  BUILDING TO BE REMOVED
-  SIDEWALK TO BE REMOVED
-  TREE TO BE REMOVED

PLANNING AND DEVELOPMENT DEPARTMENT FILE # 0708.04

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Planning • engineering

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p: 314 984 9887 f: 314 984 0587

THE VILLAGE OF ST. MARY'S
IMPROVEMENT PLANS - PHASE 1

204 NORTH MAIN STREET
O'FALLON, MO. 63366

DEMOLITION PLAN OVERALL

CIVIL ENGINEERS

CORPORATE
ENGINEERING

#001165

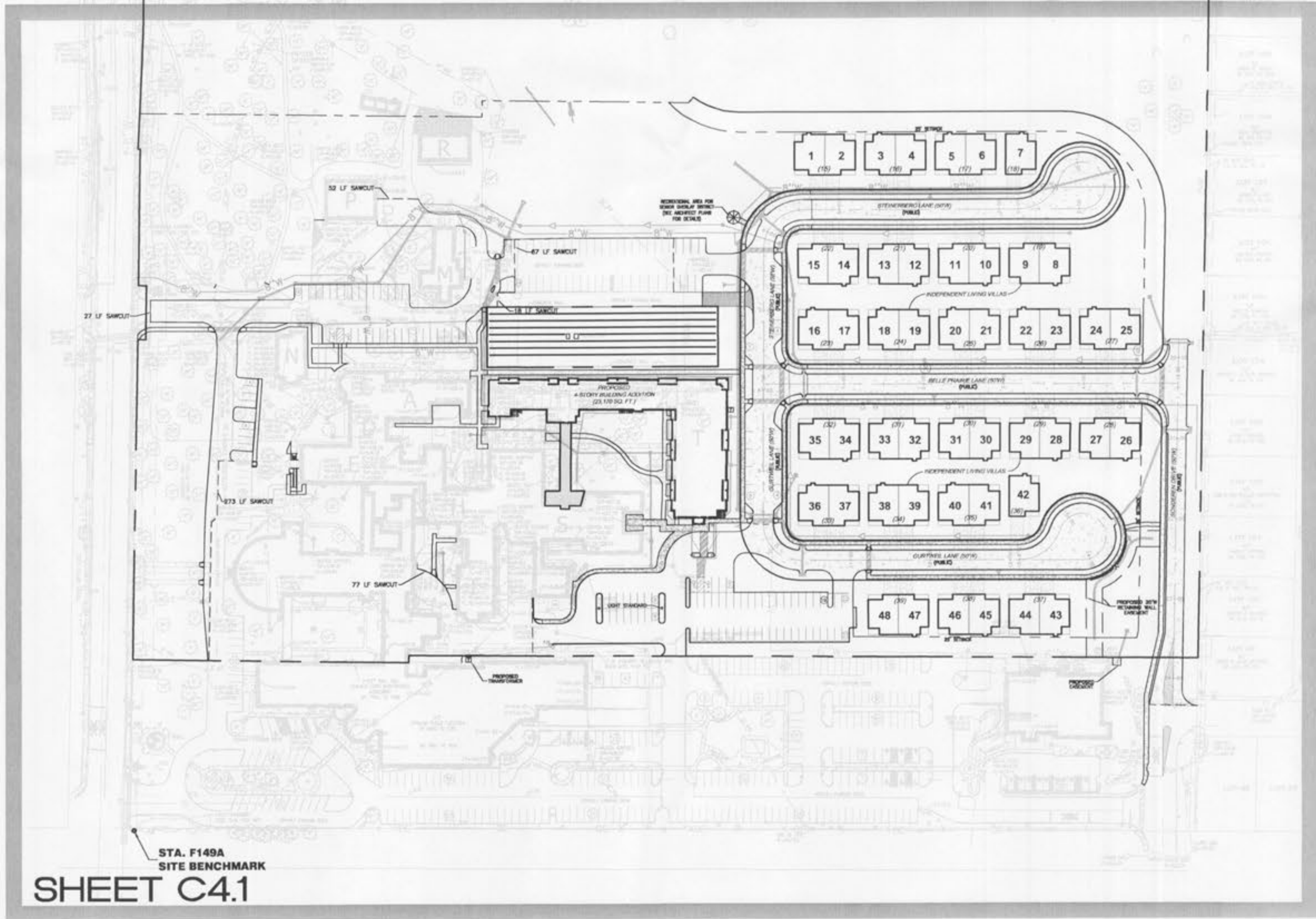
MIKE E
VONDERHEIDE
CIVIL ENGINEER

DEVELOPER/OWNER:
MCEAGLE PROPERTIES, LLC
2001 BOARDWALK SPRINGS PLACE OCEAN CITY, MD 21825

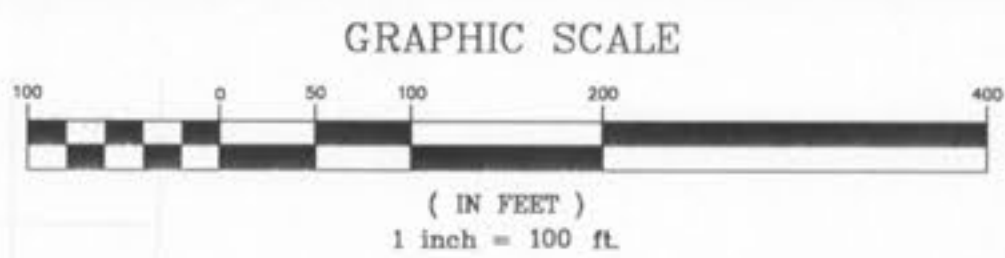
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STA. F149A
SITE BENCHMARK
SHEET C4.1



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JKW
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DATE
6/1/10

Job Number
07-0154
Sheet Number

C4.0

THE VILLAGE OF ST. MARY'S
IMPROVEMENT PLANS - PHASE 1

204 NORTH MAIN STREET
OFALLON, MO. 63366

SITE PLAN OVERALL

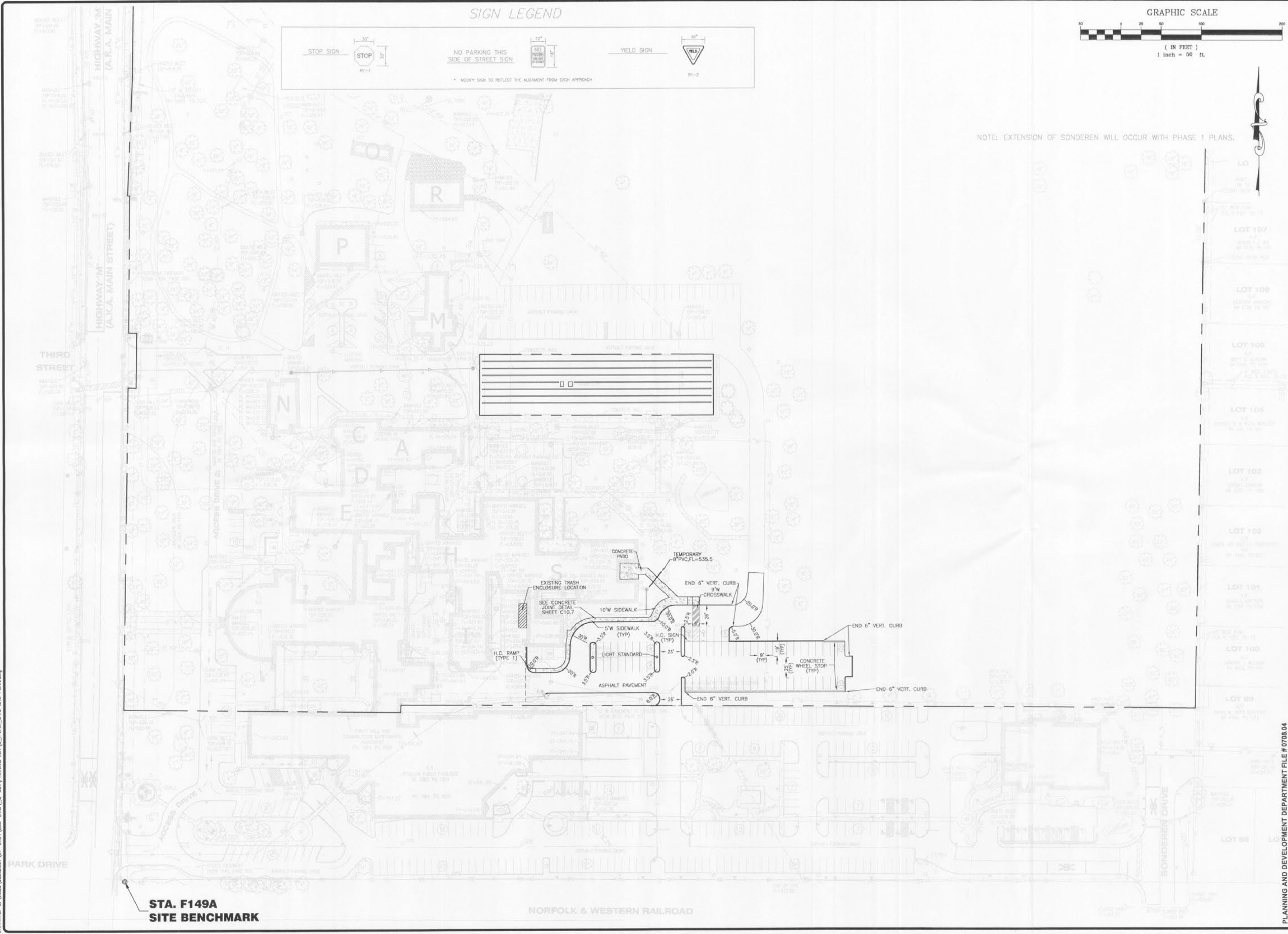


DEVELOPER/OWNER:
MCEAGLE PROPERTIES, LLC
1001 BOARDWALK SPRINGS PLACE OFALLON MO. 63366
CONTACT: ROB LOCHNER - PHONE: (636) 561-9300

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THE VILLAGE OF ST. MARYS
IMPROVEMENT PLANS - PHASE 1
204 NORTH MAIN STREET
O'FALLON, MO. 63366
SITE PLAN PHASE 1

CIVIL ENGINEERS
CORPORATE
ENGINEERING
FIRM
REGISTERED
PROFESSIONAL
ENGINEERS
STATE OF MISSOURI
REGISTERED
PROFESSIONAL
ENGINEERS
NUMBER
E-22077
DATE: 6/1/10

DEVELOPER/OWNER:
MCEAGLE PROPERTIES, LLC
1001 BOARDWALK SPRINGS PLACE O'FALLON MO. 63366
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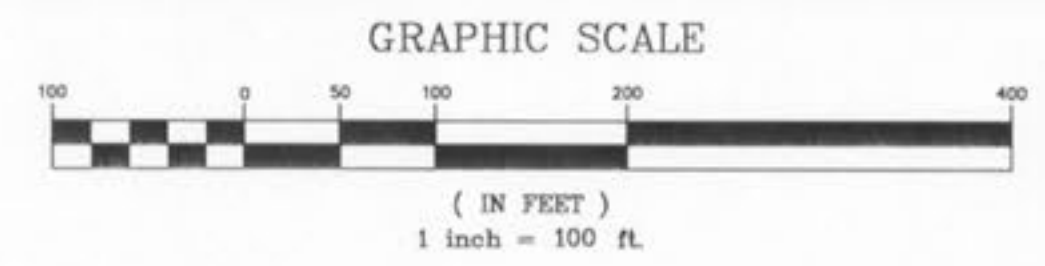
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SHEET C5.1

STA. F149A
SITE BENCHMARK

PROPOSED STOCKPILE
15,113 CY
(MAX HEIGHT TO BE 6')



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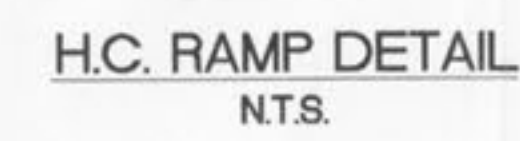
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THE VILLAGE OF ST. MARY'S
IMPROVEMENT PLANS - PHASE 1
204 NORTH MAIN STREET
OFF FALLON, MO. 65366
GRADING PLAN OVERALL



DEVELOPER/OWNER:
MCEAGLE PROPERTIES, LLC
1001 BOARDWALK SPRINGS PLACE OFF FALLON MO. 63366
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GRADING/SPOTS PHASE 1

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VONDERHEIDE
CIVIL ENGINEER
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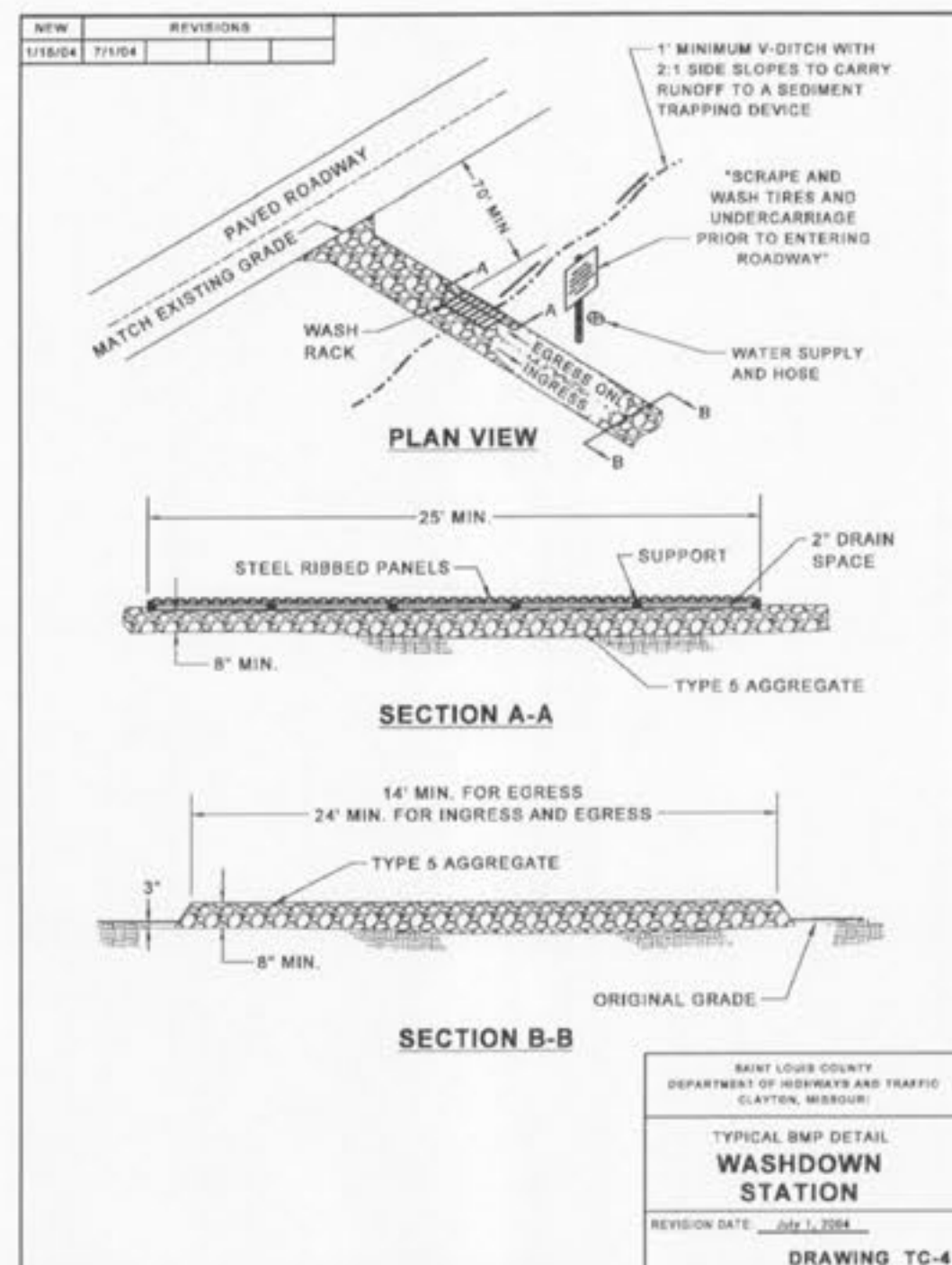
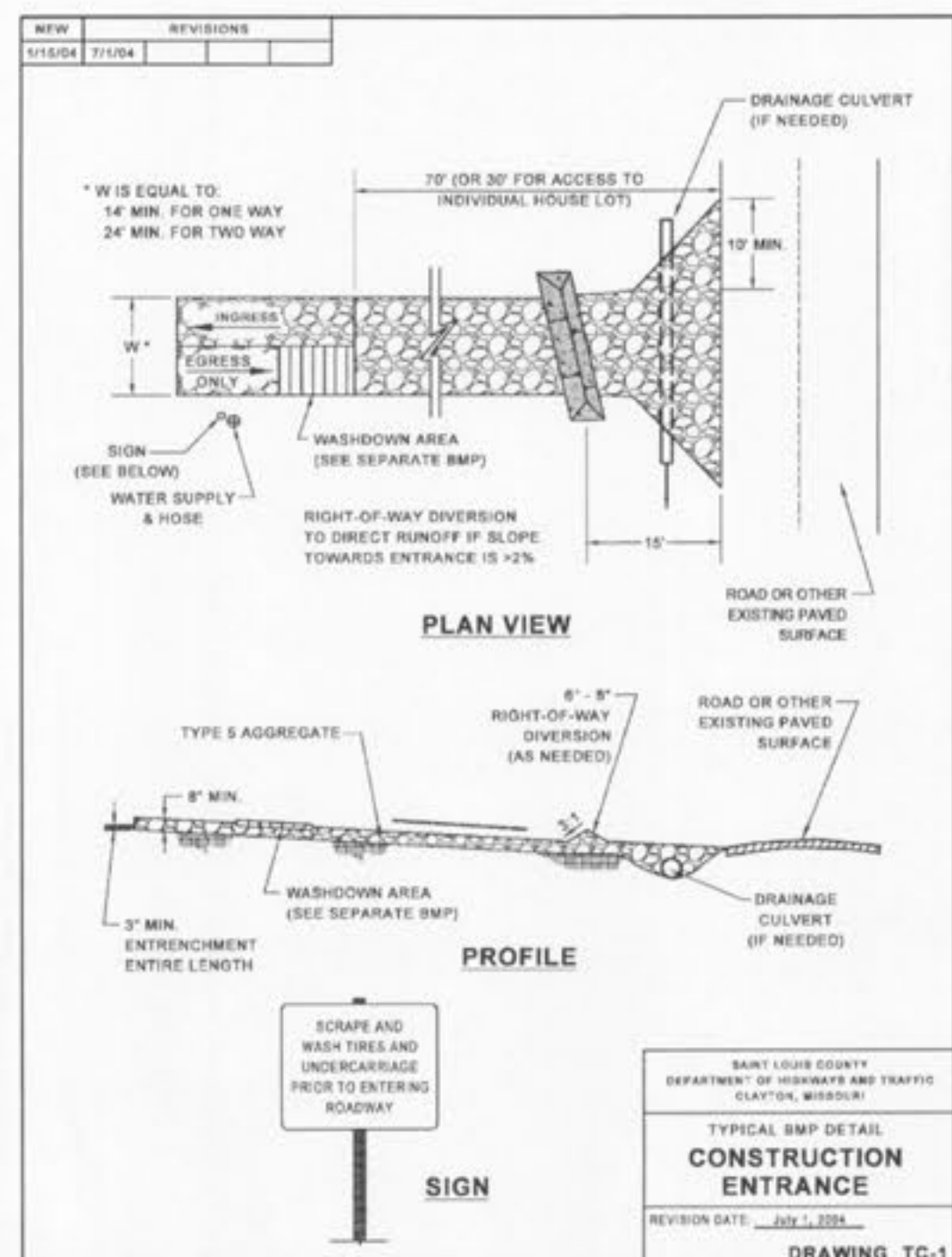
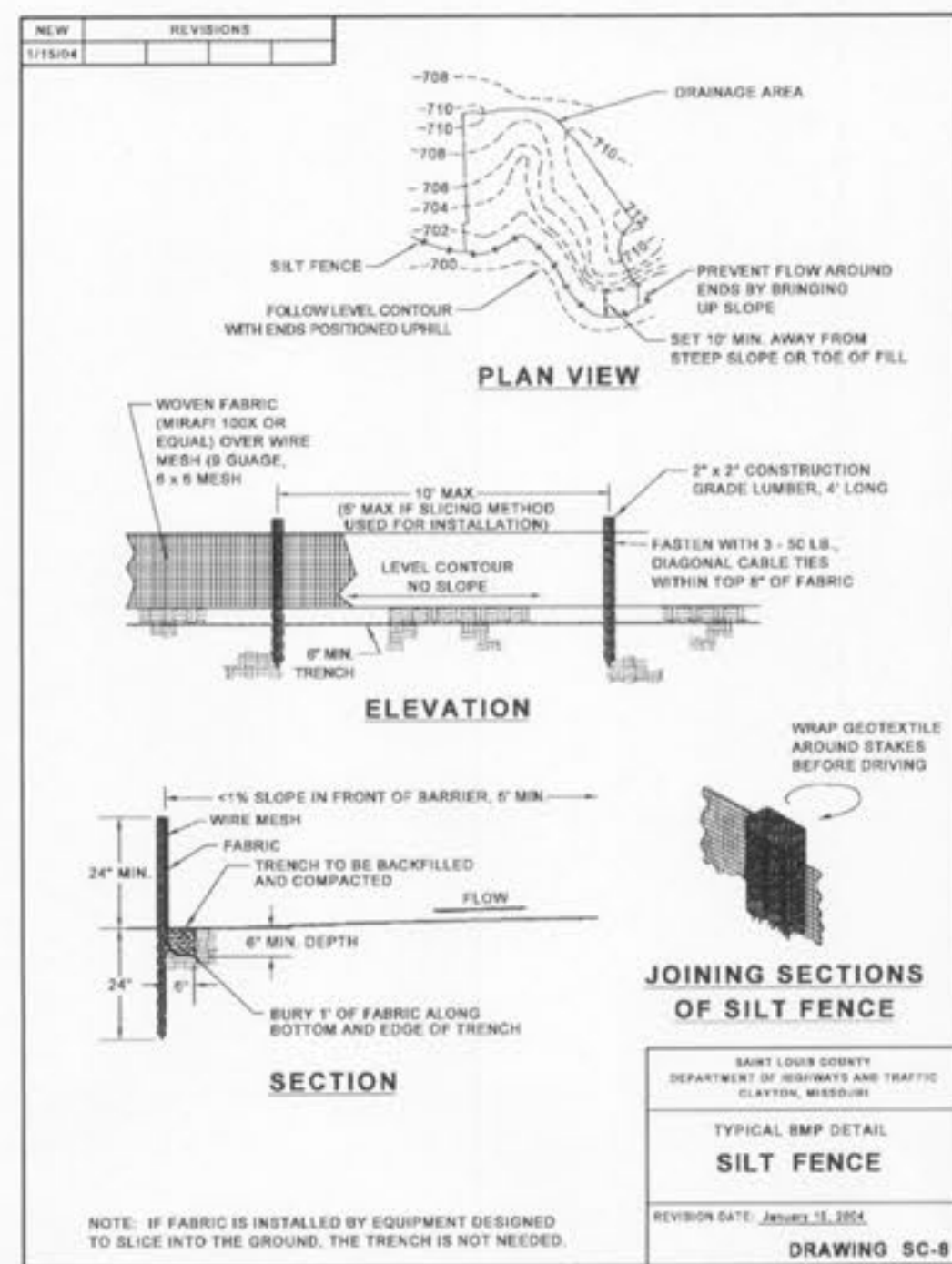
STORM SEWER PHASE 1

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1243 tom ginnerver avenue
o'fallon, missouri 63366
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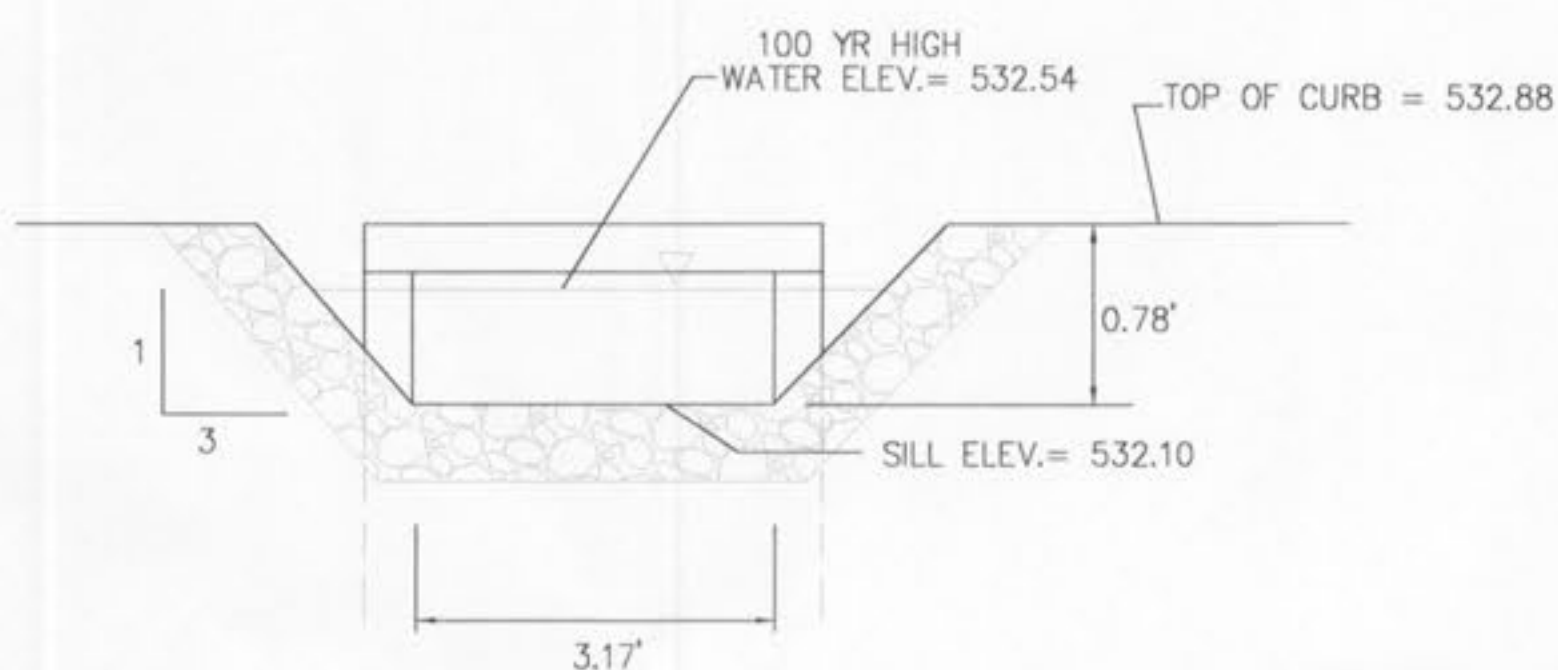
TRAPEZOIDAL CHANNEL ANALYSIS
NORMAL DEPTH COMPUTATION

FEBRUARY 11, 2009

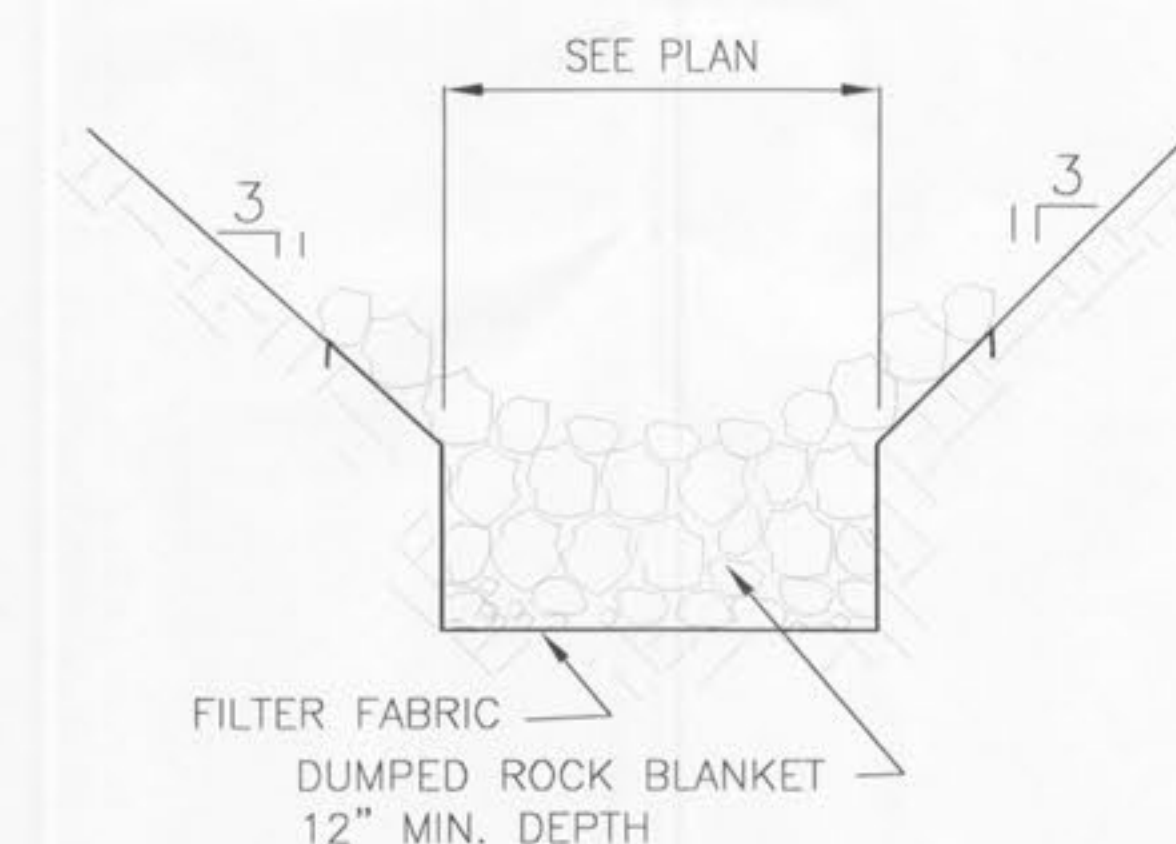
DESCRIPTION	PROGRAM INPUT DATA	VALUE
Flow Rate (cfs)		4.26
Channel Bottom Slope (ft/ft)		0.01
Manning's Roughness Coefficient (n-value)		0.033
Channel Left Side Slope (horizontal/vertical)		3.0
Channel Right Side Slope (horizontal/vertical)		3.0
Channel Bottom Width (ft)		3.17

DESCRIPTION	COMPUTATION RESULTS	VALUE
Normal Depth (ft)		0.44
Flow Velocity (fps)		2.16
Froude Number		0.654
Velocity Head (ft)		0.07
Energy Head (ft)		0.51
Cross-Sectional Area of Flow (sq ft)		1.97
Top Width of Flow (ft)		5.8

HYDROCALC Hydraulics for Windows, Version 1.2a Copyright (c) 1996
Dodson & Associates, Inc., 5629 FM 1960 West, Suite 314, Houston, TX 77069
Phone: (281)440-3787, Fax: (281)440-4742, Email: software@dodson-hydro.com
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1 OVERFLOW DETAIL FOR EXISTING A.I. #80
SCALE: N.T.S. REF. DWG.



NOTE: DUMPED ROCK BLANKET TO BE A MIN. 12" DIA. QUARRY RUN STONE.

2 ROCK BLANKET DETAIL
SCALE: N.T.S. REF. DWG.

TYPICAL TEMPORARY DIVERSION SWALE
SWALE IS TO BE SEEDING.

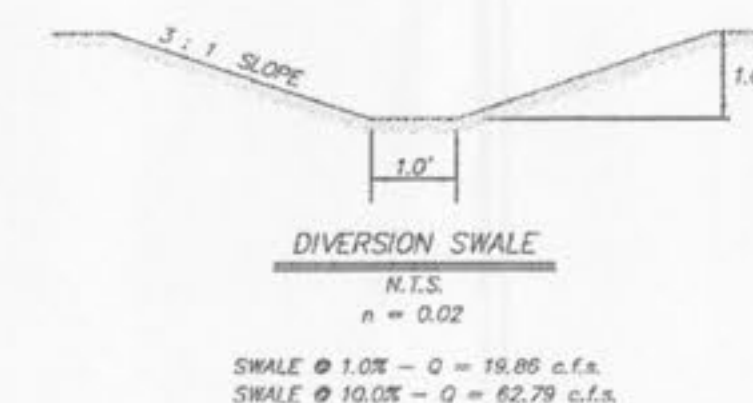
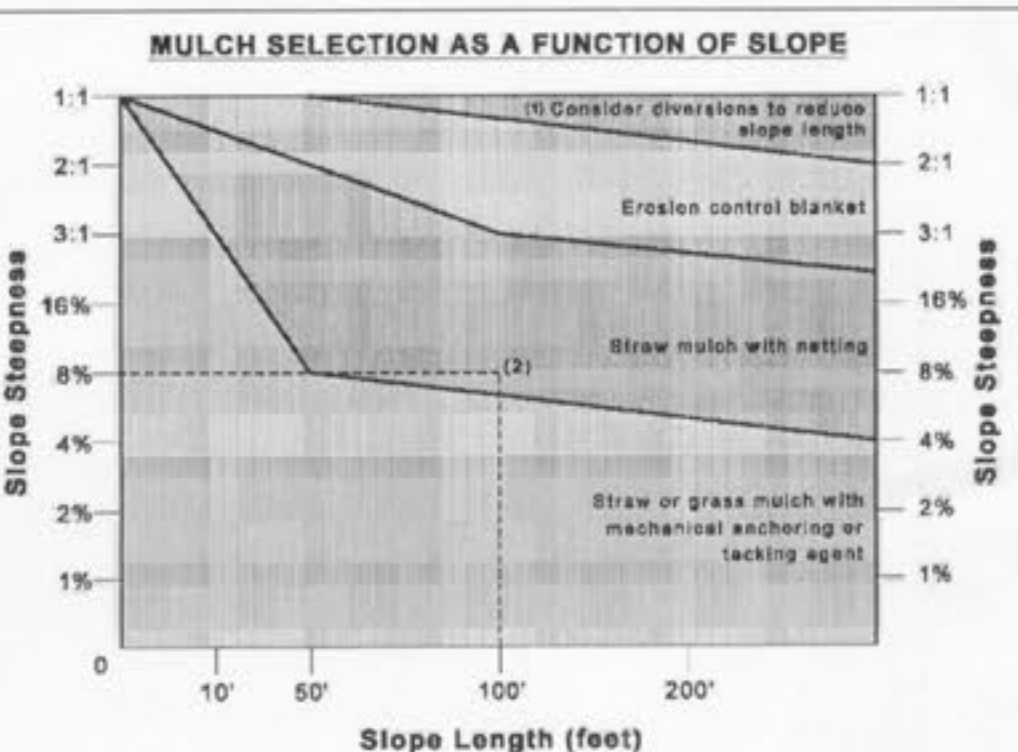


TABLE 3: MULCH SCHEDULE



GENERAL MULCH RECOMMENDATIONS TO PROTECT FROM SPLASH AND SHEET FLOW

Material	Rate Per Acre	Requirements	Notes
Straw	2 to 2.5 tons	Dry, unchopped, unweathered, avoid weeds.	Spread by hand or machine; must be tacked or tied down.
Wood Chips or Wood Cellulose	8.5 to 10 tons	Apply with blower, chip spreader, or by hand. Do not use in hot, dry weather.	Use with hydro seeders; bag in used for tack stone. Do not use in hot, dry weather.
Wood Chips	5 to 8 tons	Apply with blower, chip spreader, or by hand. Not for fine-textured areas.	Apply with mulch spreader, chip spreader or by hand. Do not use asphalt tack.
Bark	35 cu. yds.	Apply with mulch spreader, chip spreader or by hand. Do not use asphalt tack.	

TABLE 2: VEGETATION/SEEDING RATES AND MIXTURES

SEEDING REQUIREMENTS

Permanent Seeding

Month	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec
Tall Fescue	O	O	O	O	O	O	O	O	O	O	O	O
Smooth Brome	O	O	O	O	O	O	O	O	O	O	O	O
Fescue & Brome	A	A	O	O	O	P	O	O	O	P	P	A
Fescue, Ryegrass & Brome	A	A	O	O	O	P	O	O	O	P	P	A

Temporary Seeding

Month	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec
Ryegrass	A	A	O	O	O	O	O	O	O	O	A	A
Orchard Grass	A	A	O	O	O	O	O	O	O	O	A	A

O = Optimum seeding date.
A = Acceptable seeding date.
P = Permitted seeding dates with seeding 2 months later - initially use 50% of seed and 70% of fertilizer. Repeat with additional 70% seed and remaining fertilizer.

Minimum Fertilizer and Seeding Rates

Seeding Method	Pounds per acre	Pounds per 1000 sq. ft.
Tall Fescue	300	7.0
Smooth Brome	200	4.6
Mixture #1	250	5.7
Mixture #2	250	4.8

Mixture #1 = Tall Fescue @ 150 pounds per acre and Brome @ 100 pounds per acre.
Mixture #2 = Tall Fescue @ 100 pounds per acre, Perennial Ryegrass @ 100 pounds per acre, and Kentucky Bluegrass @ 10 pounds per acre.
** Seeding rate for slopes in excess of 20% (5:1) shall be 10 pounds per 1000 sq. ft.

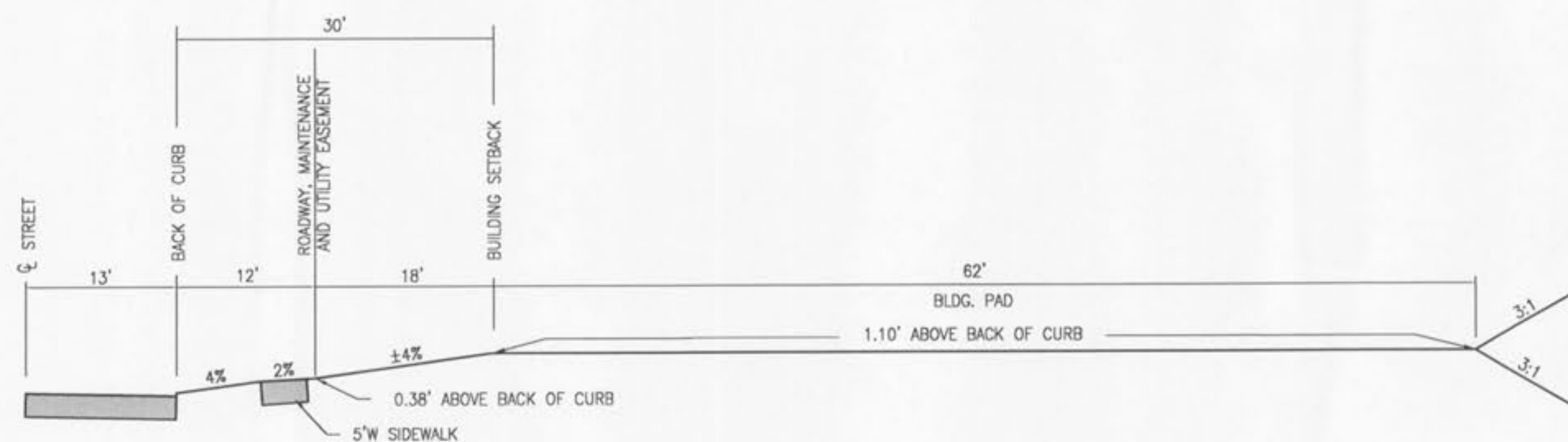
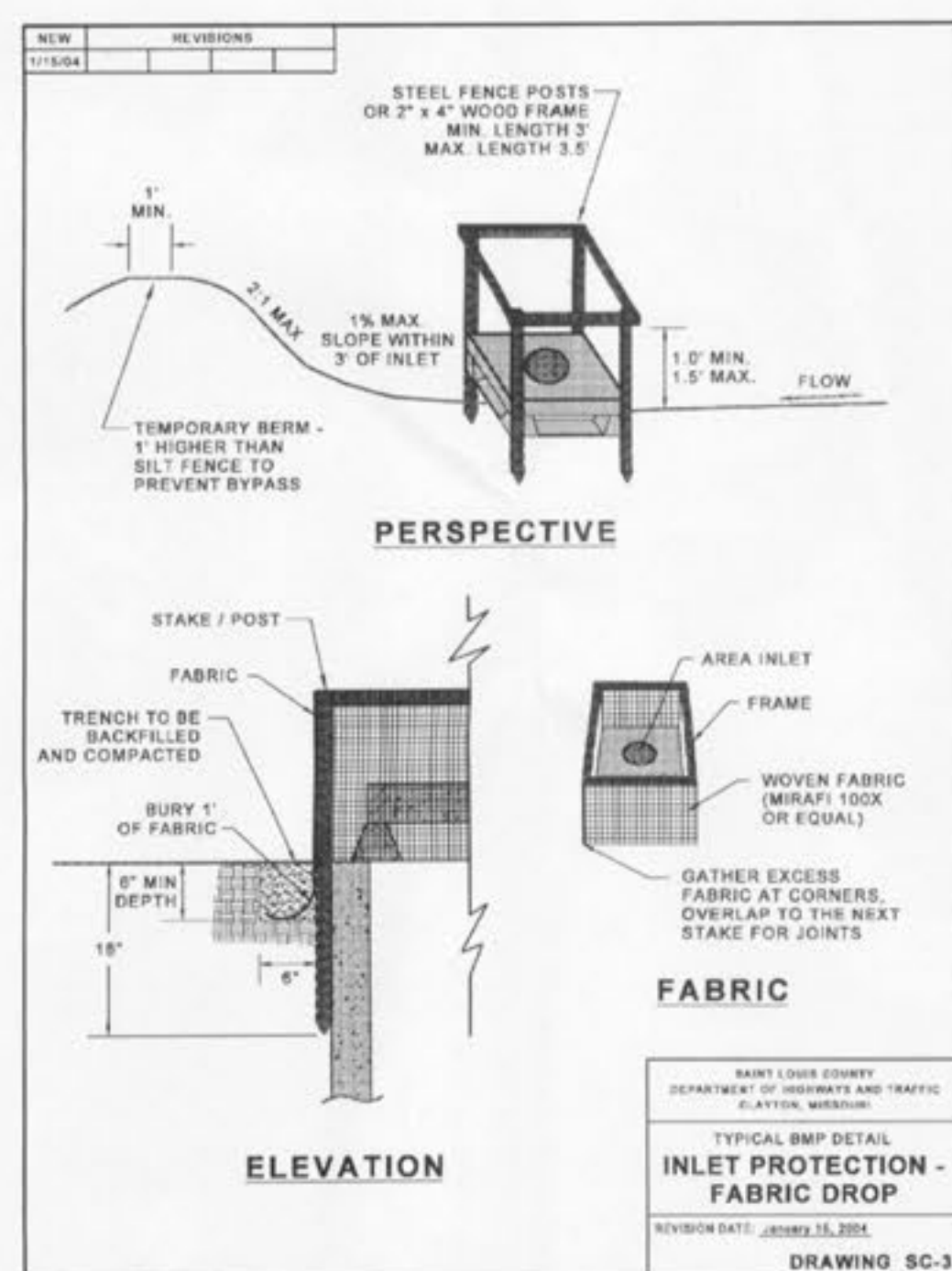
Temporary Seeding

Month	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec
Ryegrass	A	A	O	O	O	O	O	O	O	O	A	A
Orchard Grass	A	A	O	O	O	O	O	O	O	O	A	A

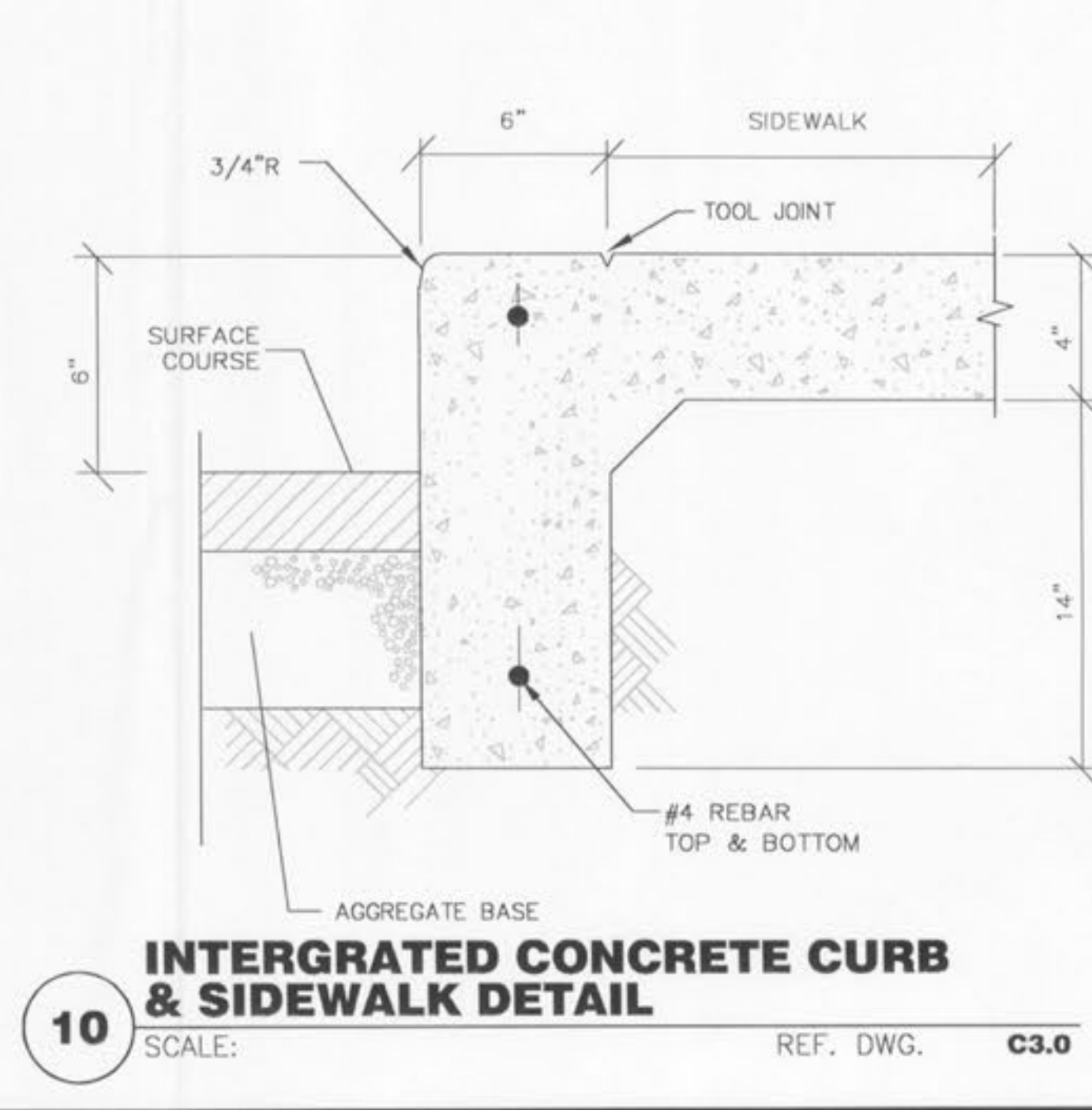
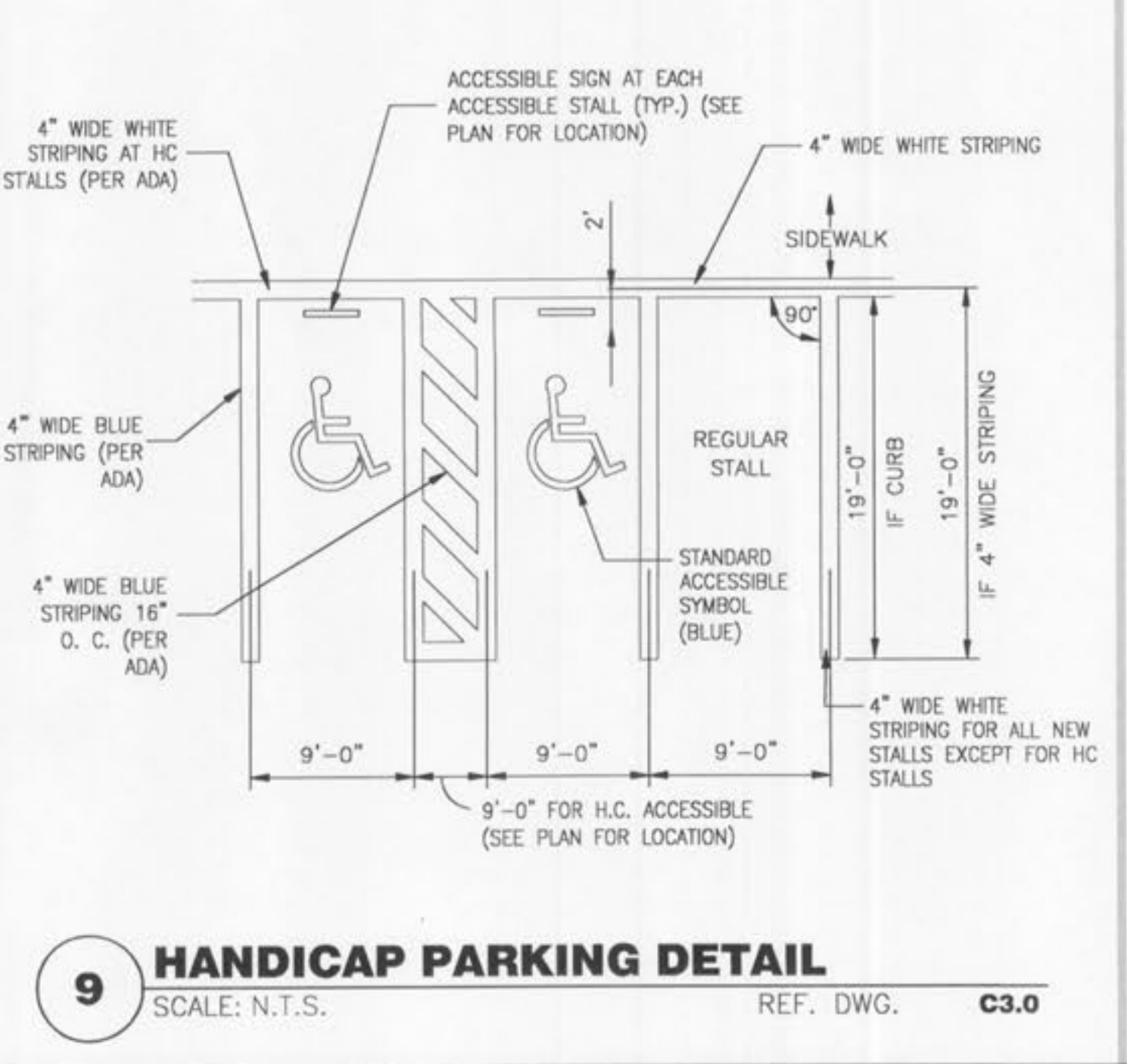
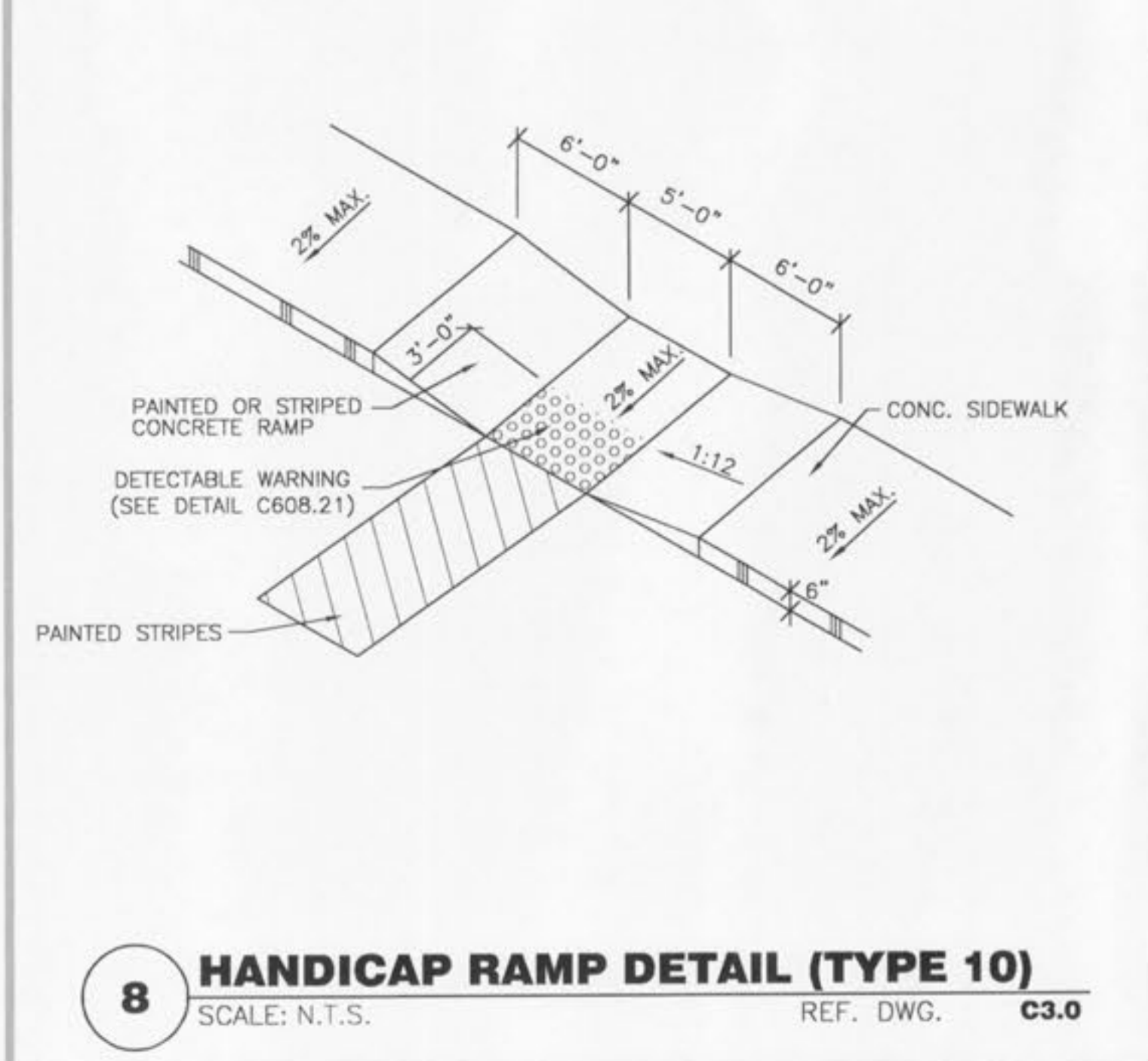
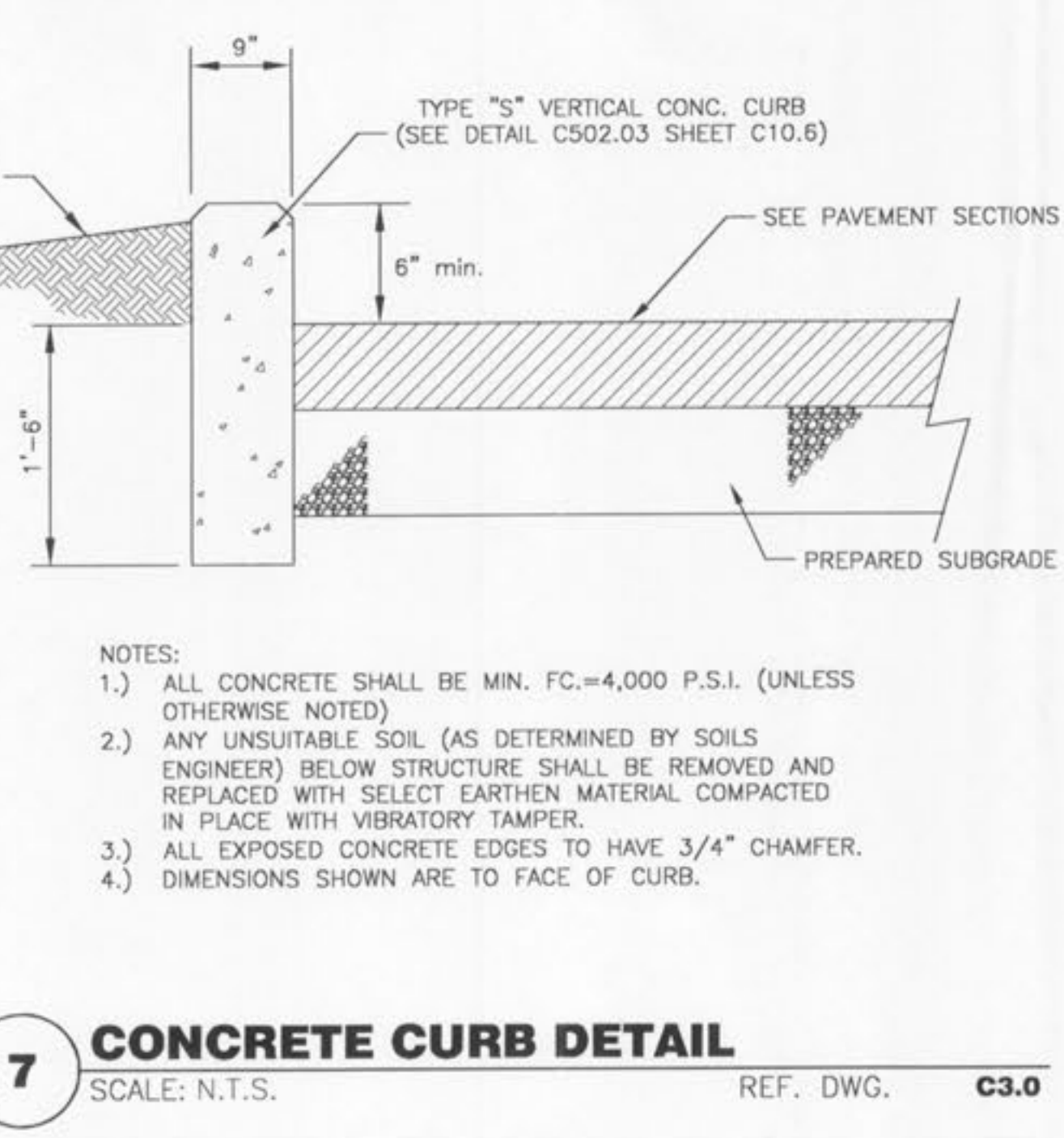
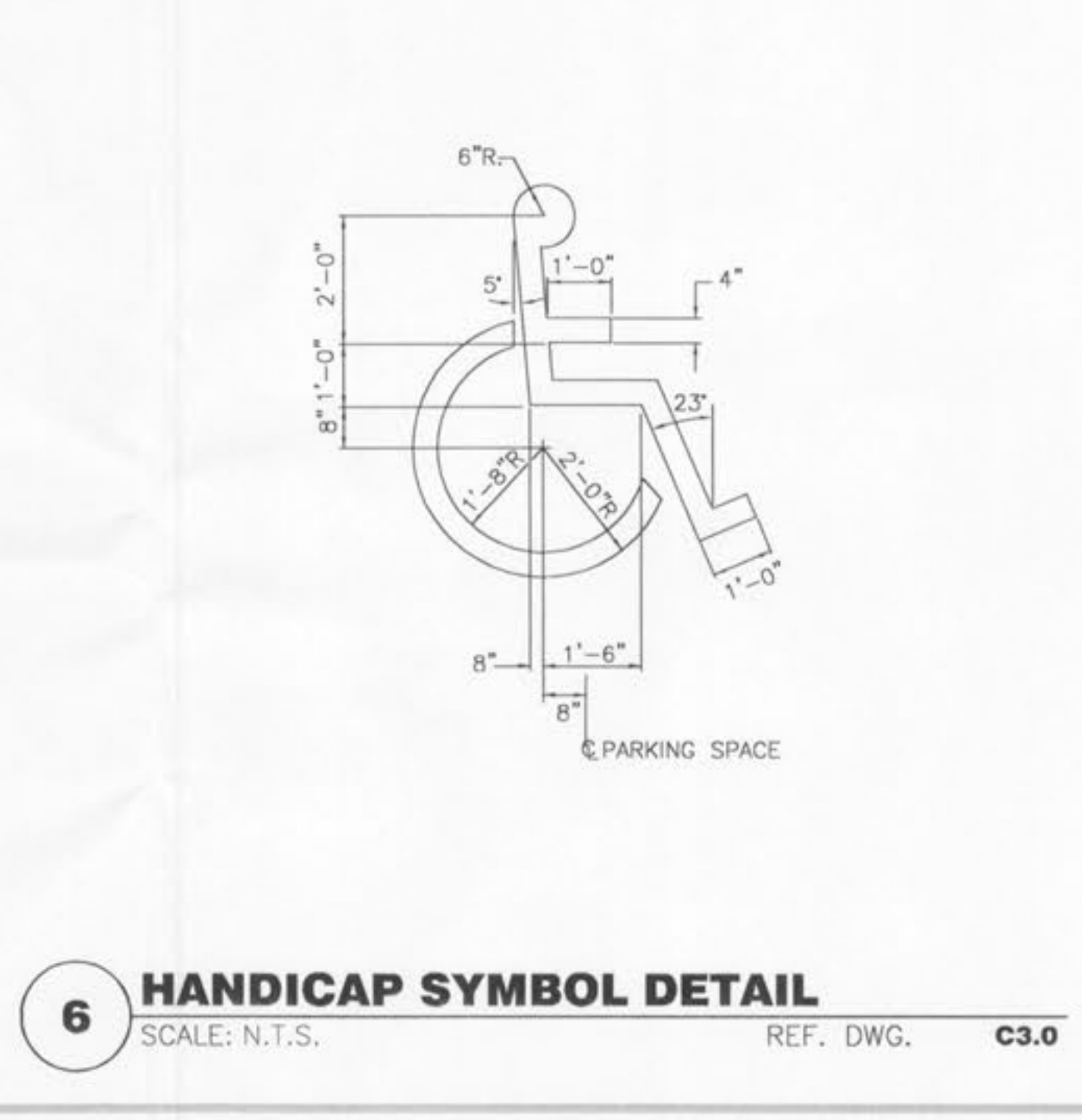
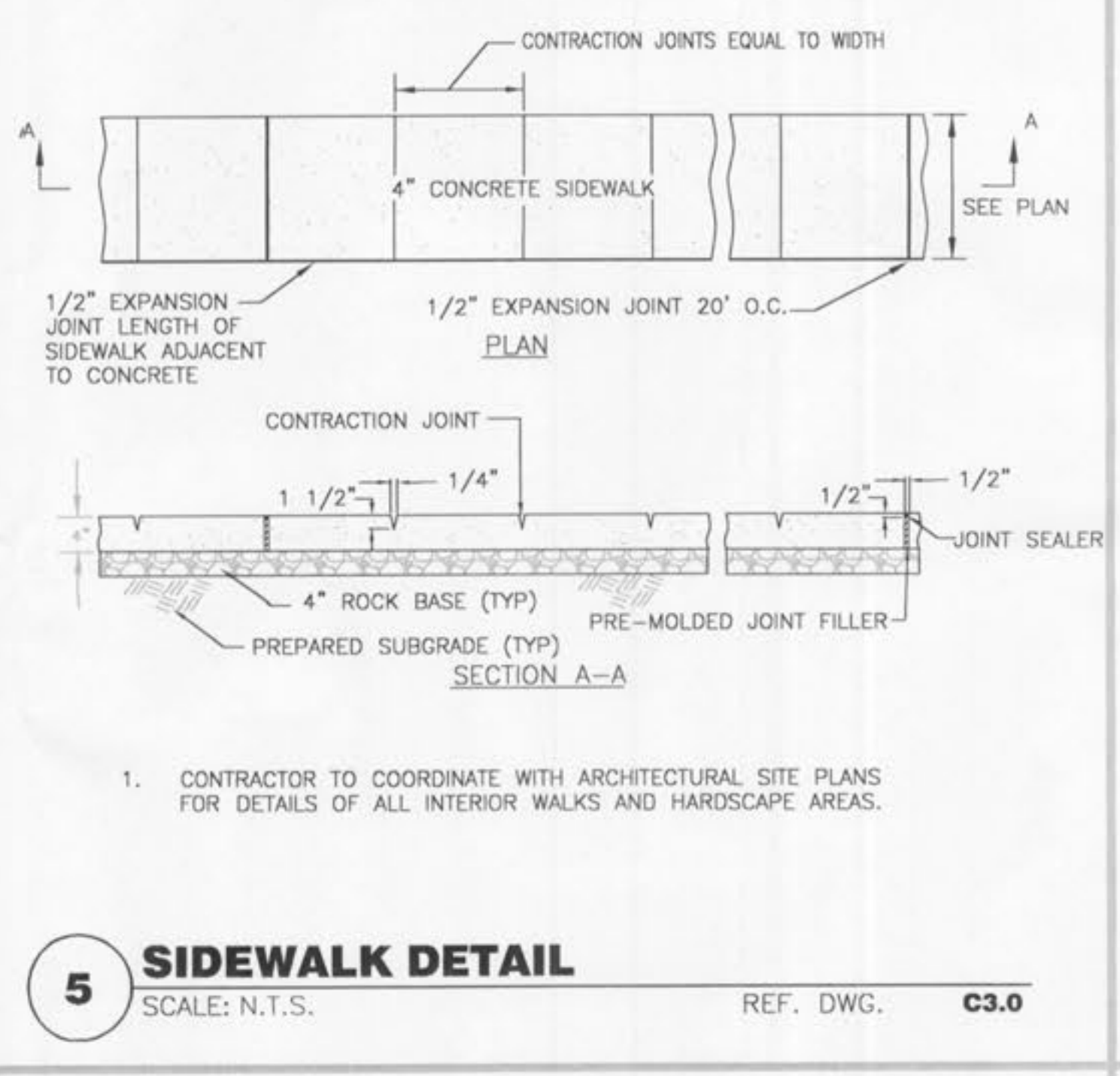
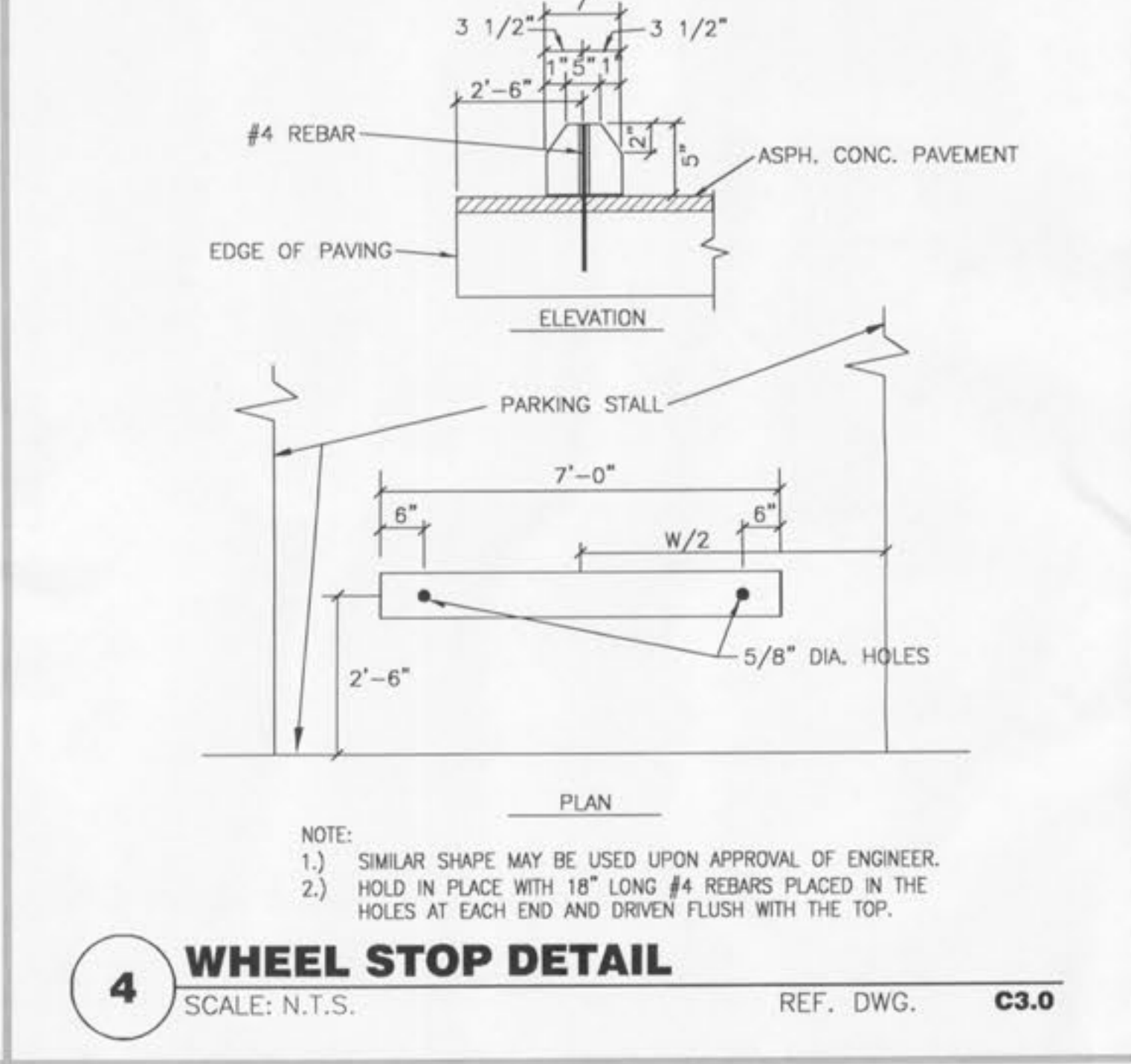
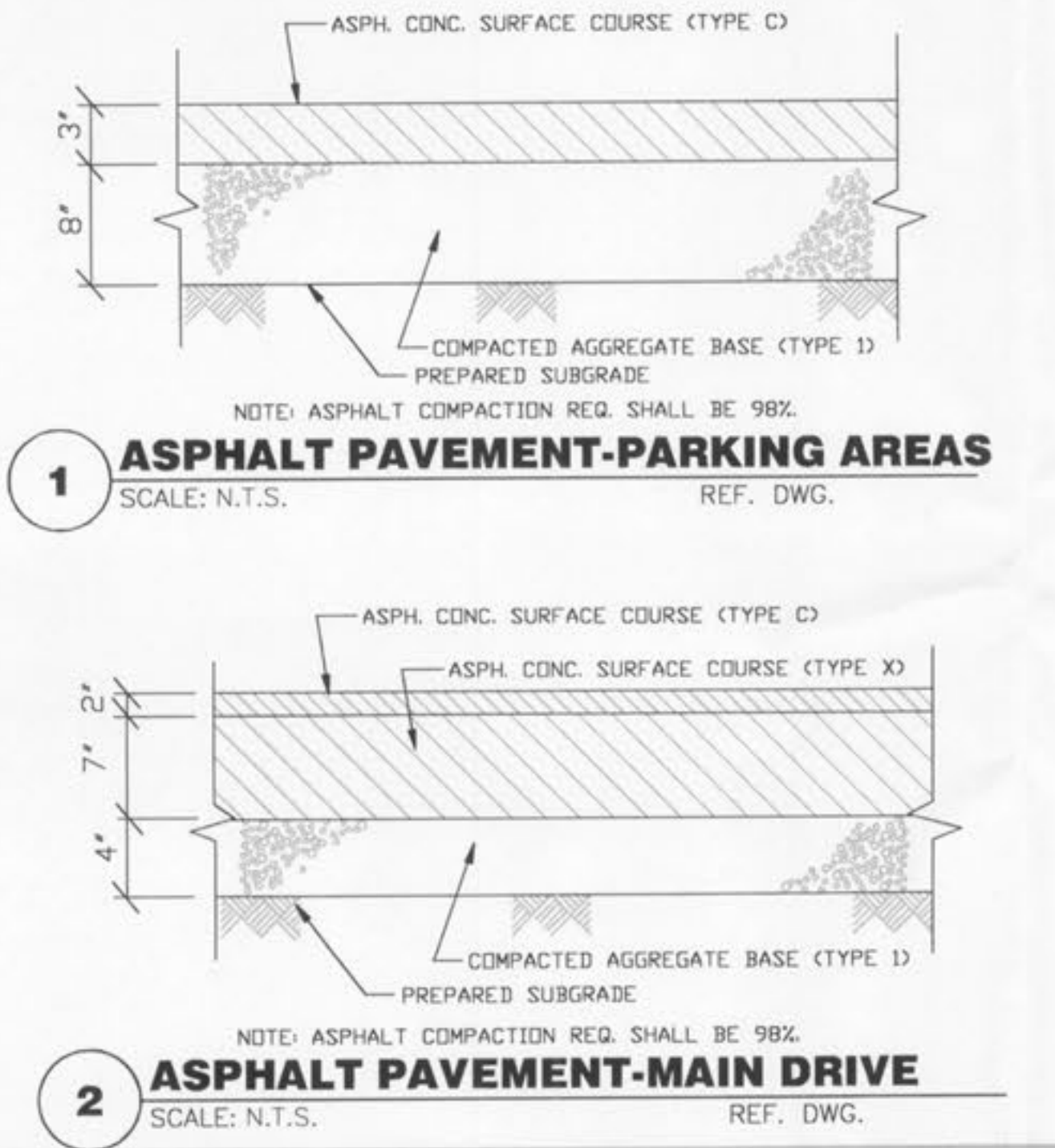
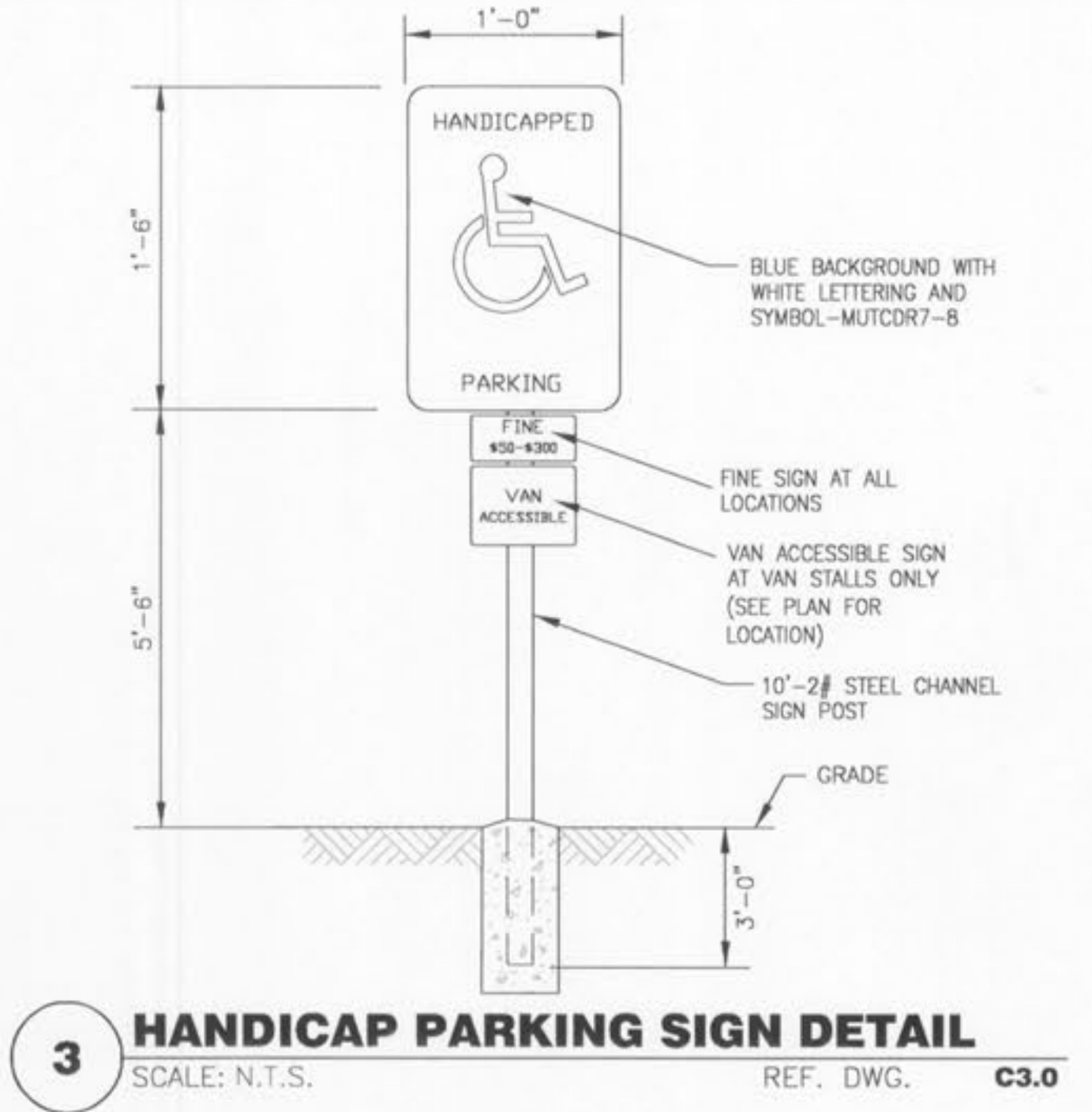
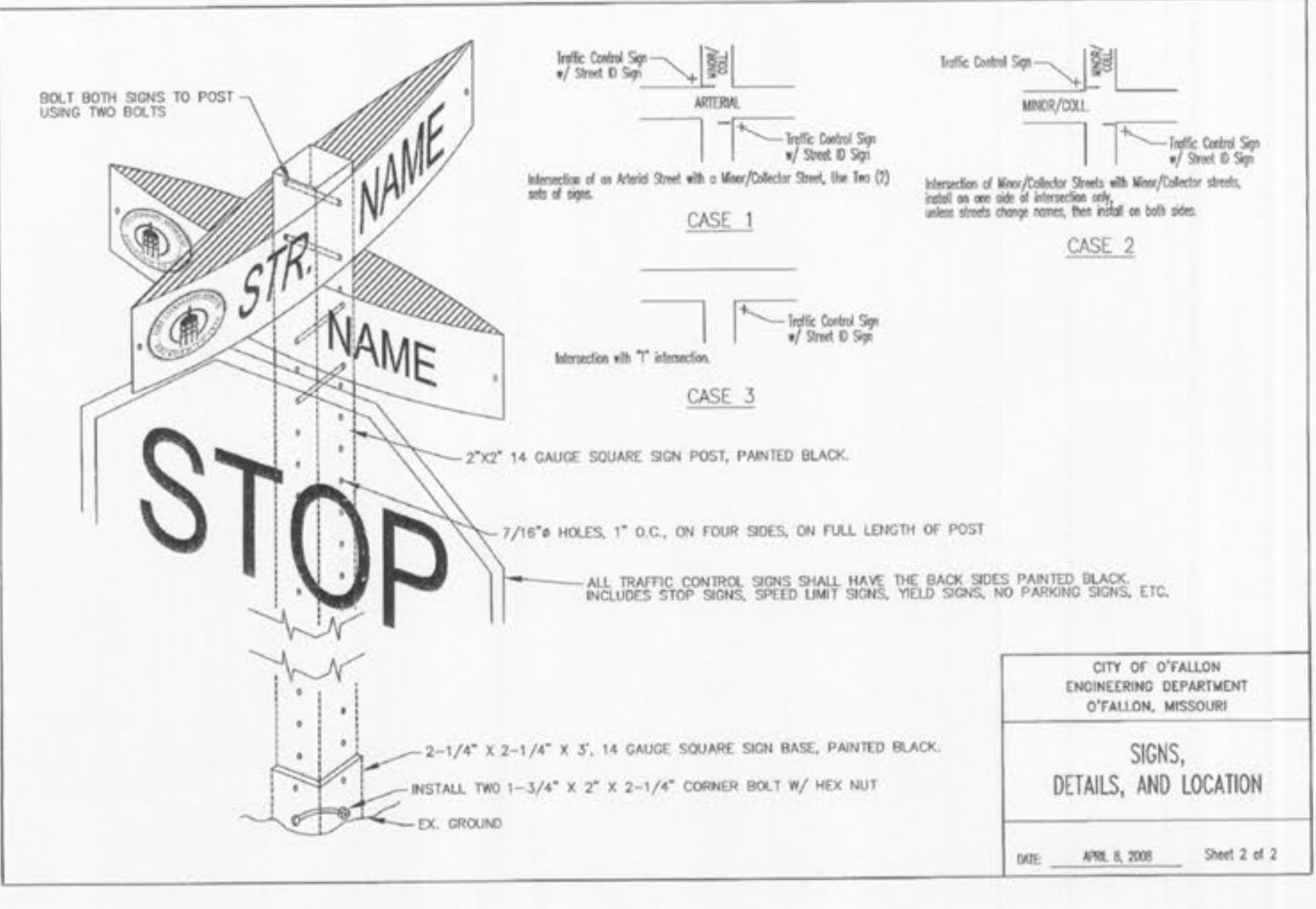
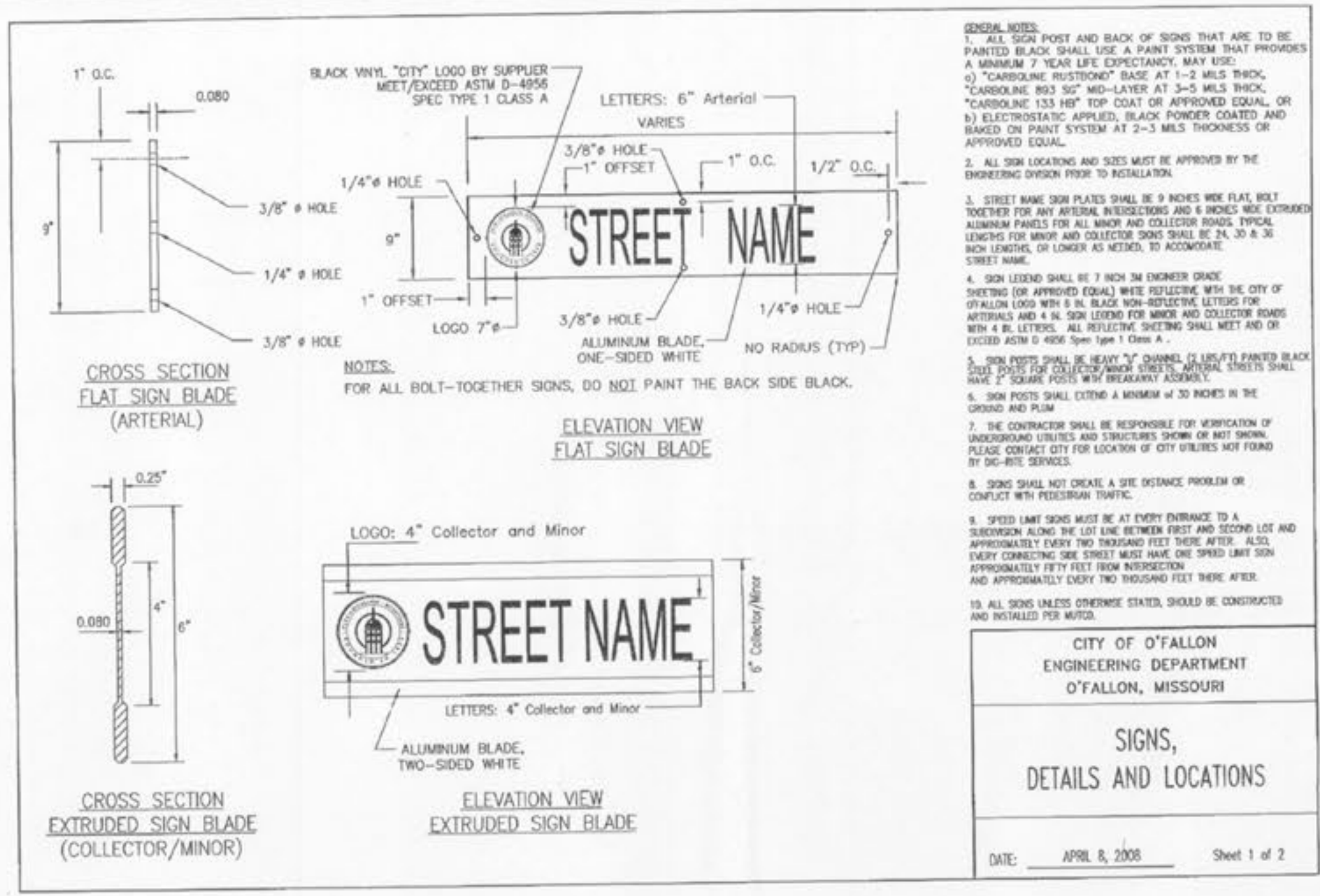
Fertilizer

Month	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec
Nitrogen	40	40	40	40	40	40	40	40	40	40	40	40
Phosphate	60	60	60	60	60	60	60	60	60	60	60	60
Potassium	60	60	60	60	60	60	60	60	60	60	60	60
Lime - LHM	600	600	600	600	600	600	600	600	600	600	600	600

CHM = Effective seedling material per State evaluation of quarter rock.



TYPICAL INDEPENDENT LIVING VILLAS GRADING TEMPLATE (FINISHED FLOOR SET AT 2.0' ABOVE BACK OF CURB)



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THE VILLAGE OF ST. MARY'S
IMPROVEMENT PLANS - PHASE 1
204 NORTH MAIN STREET
O'FALLON, MO. 63366

GOLE and ASSOCIATES INCORPORATED
planning • engineering • surveying • landscape architecture
10777 sunset office drive
St. Louis, MO 63143
p: 314.984.9887 f: 314.984.0087

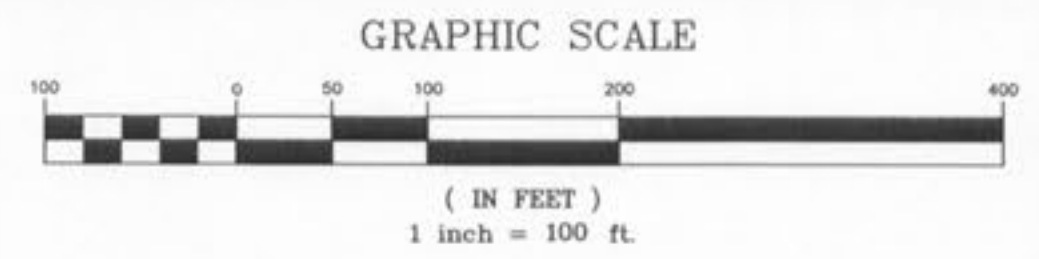
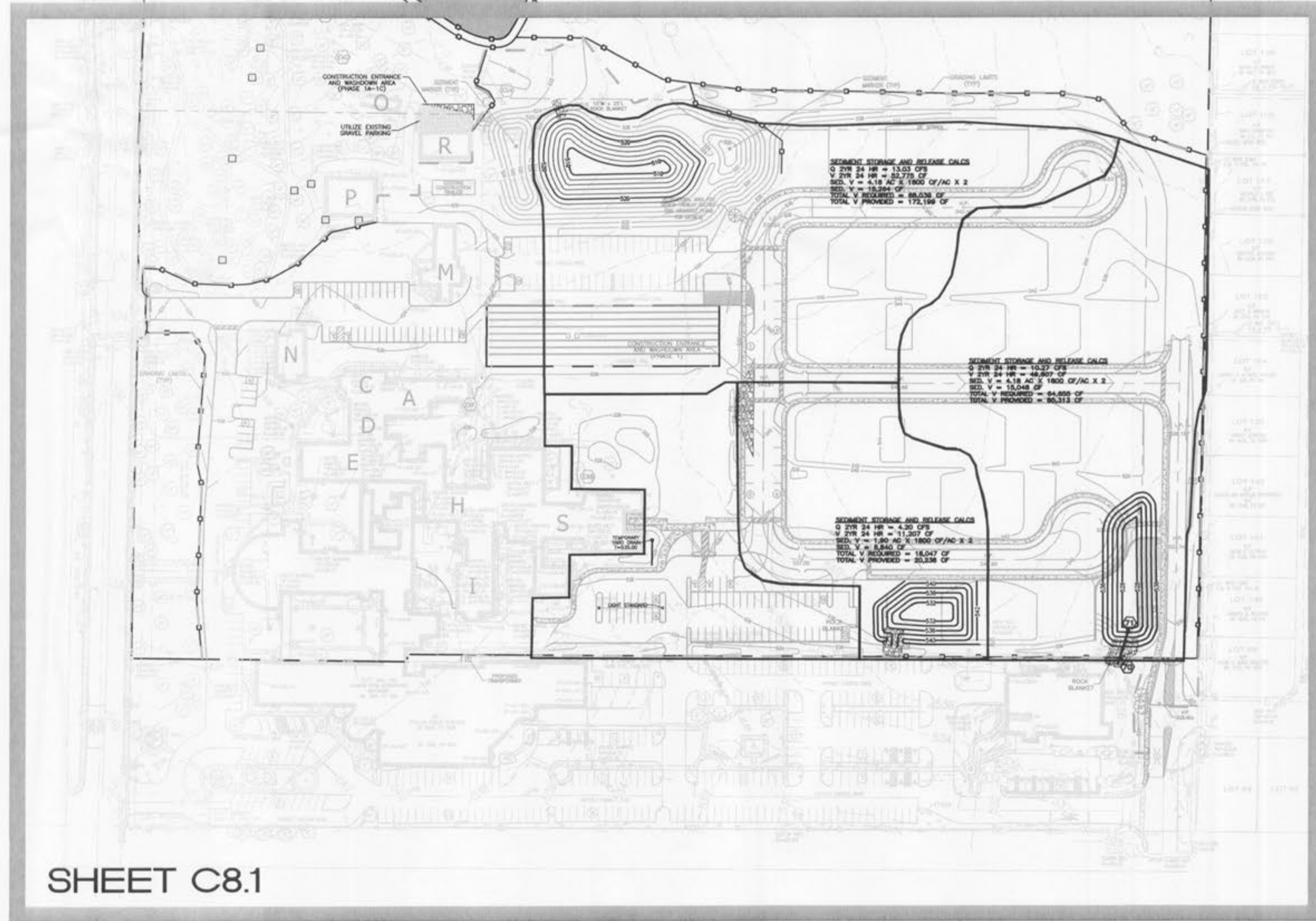
**1243 tom ginner avenue
St. Louis, MO 63116
p: 636.978.7508 f: 636.978.7509**

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saint louis, missouri 63127
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204 NORTH MAIN STREET
OFALLON, MO. 63366
SWPPP OVERALL



DEVELOPER/OWNER
MCEAGLE PROPERTIES, LLC
1001 BOARDWALK SPRINGS PLACE OFALLON MO. 63366
CONTACT: ROB LOCHNER - PHONE (636) 561-9000
THE PROFESSIONAL ENGINEER'S SEAL AND SIGNATURE SHALL BE PLACED HEREON
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OR PORTIONS OF THIS PLAN SHALL BE ASSUMED BY THE UNDERSIGNED PROFESSIONAL
ENGINEER. THIS SEAL IS NOT VALID UNLESS IT IS SIGNED AND DATED BY THE
ENGINEER. ANY PART OR PARTS OF THE PROJECT TO WHICH THIS SEAL REFERS

DATE	NO	REVISION DESCRIPTION
7/29/10	1	QTY COMMENTS



DEVELOPER/OWNER:

DEVELOPER/OWNER:



PLANNING AND DEVELOPMENT DEPARTMENT FILE # 0708.04

THE VILLAGE OF ST. MARY'S
IMPROVEMENT PLANS - PHASE 1

204 NORTH MAIN STREET
O'FALLON, MO. 63366

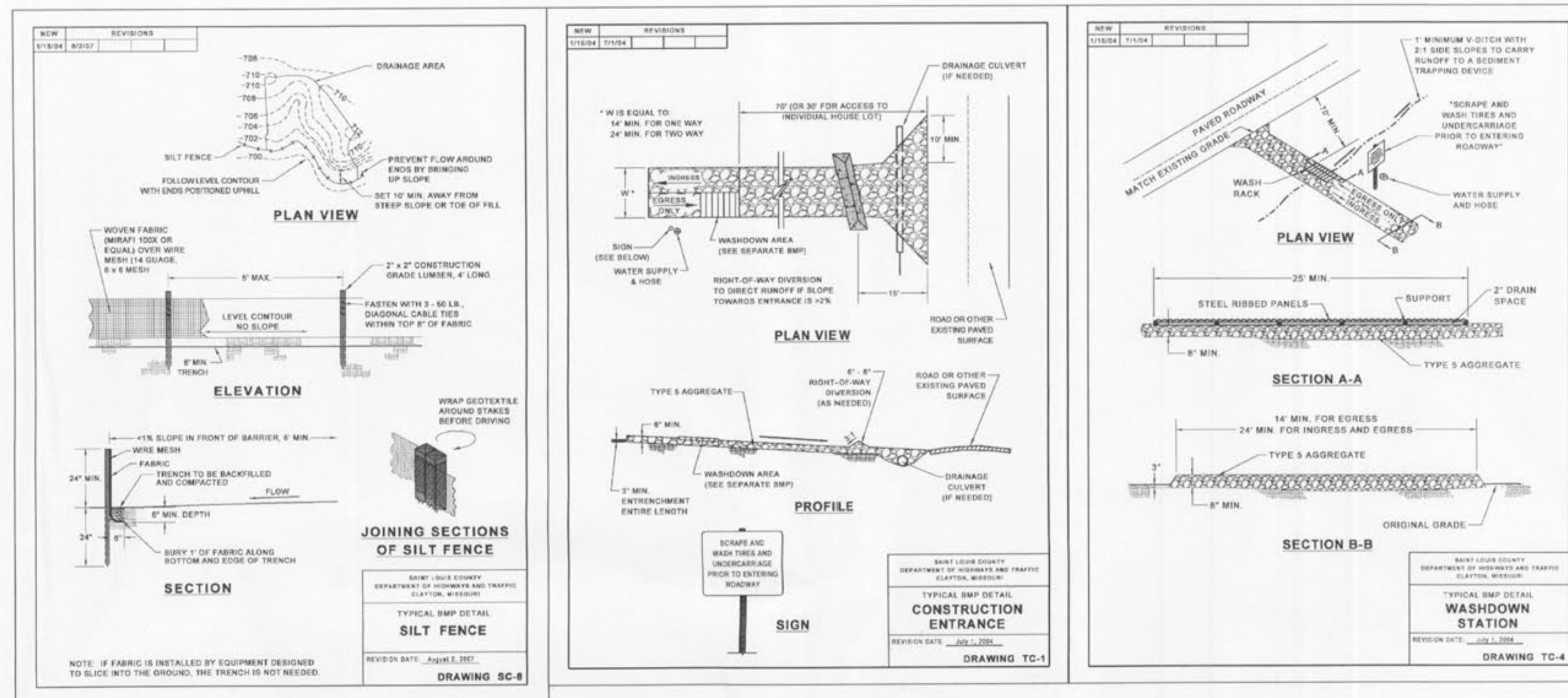
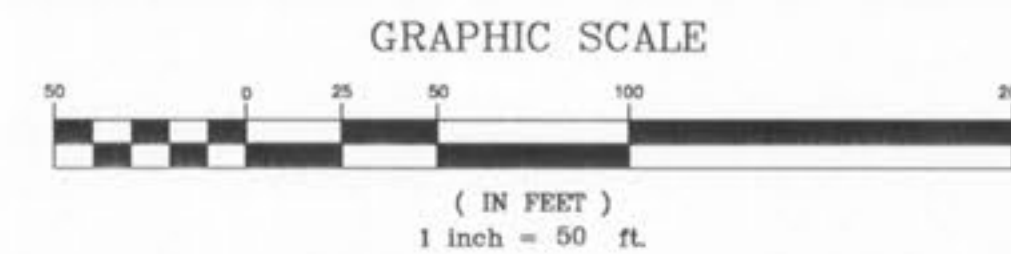
SWPPP

CIVIL ENGINEERS
CORPORATE
ENGINEERING
CERTIFICATE
#001165
MIKE E
VONDERHEIDE
CIVIL ENGINEER
PE NO. E-23077

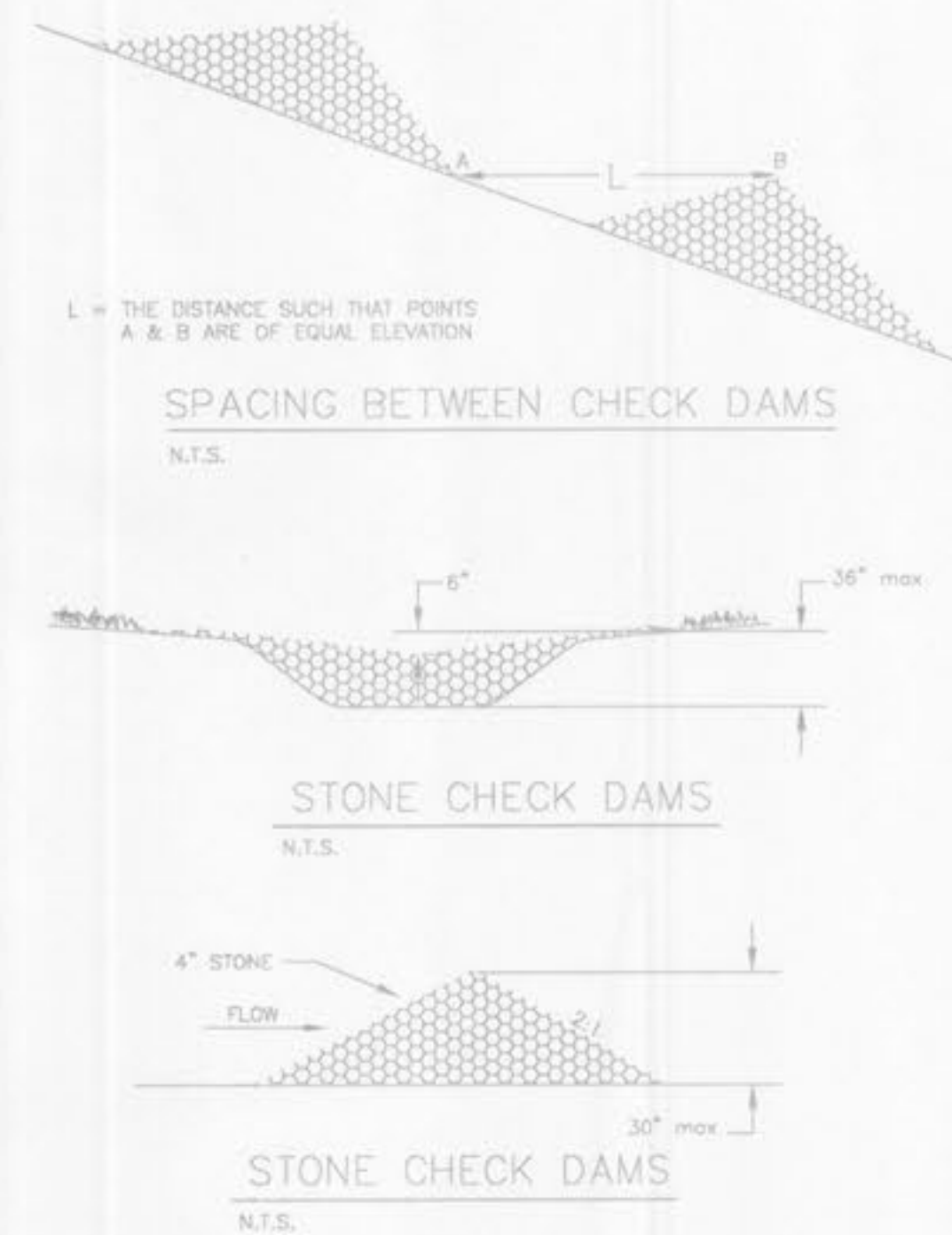
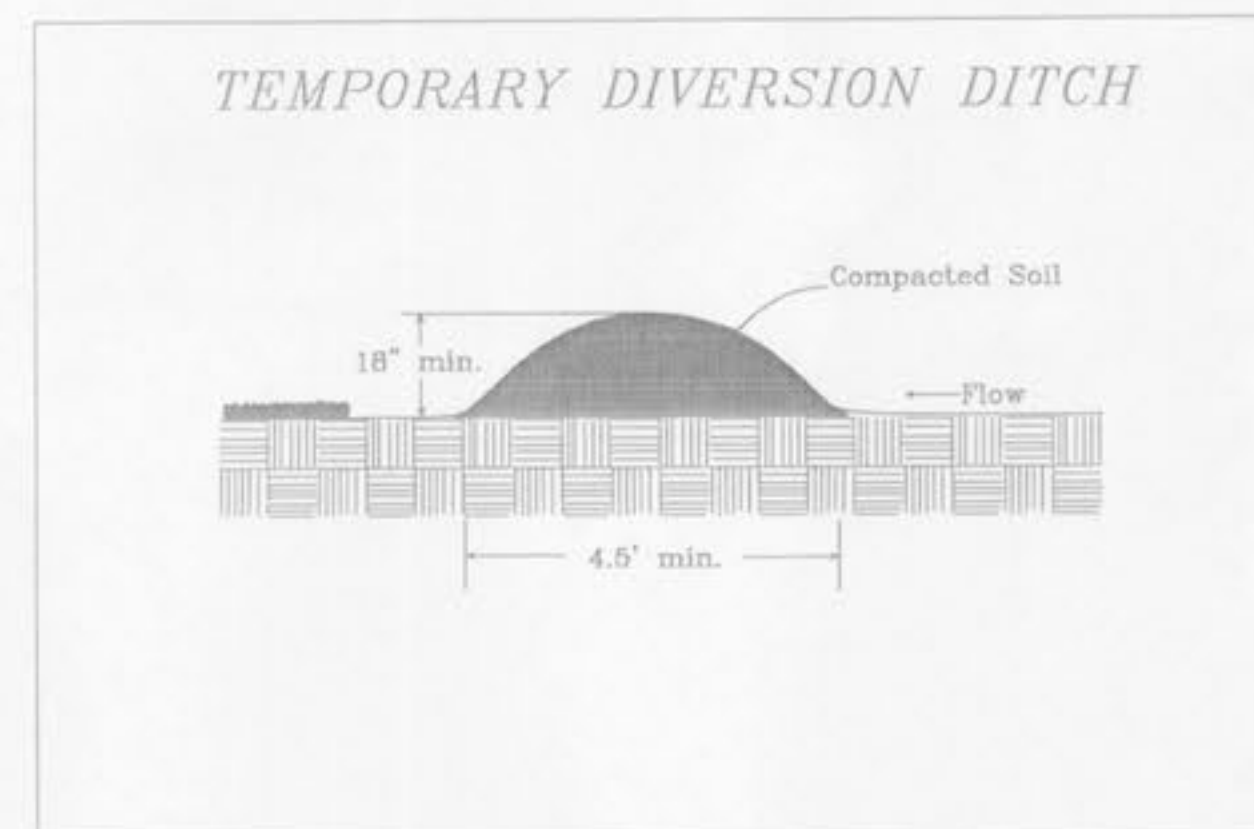
MECEAGLE PROPERTIES, LLC
0001 BOARDWALK SPRINGS PLACE OFFALON MO. 63366
CONTACT: ROB LOCHNER - PHONE: (636) 561-9300

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IF WATER IS NOT AVAILABLE, A WATER TRUCK WILL BE PROVIDED.



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10777 sunset office drive
sunnyvale, ca 94087
p: 314 984 9887 f: 314 984 0587
1243 tom ginner avenue
sunnyvale, ca 94087
p: 650 978 7508 f: 650 978 7509

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THE VILLAGE OF ST. MARYS
IMPROVEMENT PLANS - PHASE 1
204 NORTH MAIN STREET
OFALLON, MO. 63366
SWPPP SPECIFICATIONS

CIVIL ENGINEERS
CORPORATE
ENGINEERING
CERTIFICATE
NUMBER
E-23077
MIKE E. VONDERHEIDE
PE NO. E-23077
DATE: 8/1/07

DEVELOPER/OWNER:
MCEAGLE PROPERTIES, LLC
1001 BOARDWALK SPRINGS PLACE OFALLON MO 63366
CONTACT: ROB LOCHNER - PHONE (636) 561-9000
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(ORDINANCE SECTION 227.41) REMAINING RESPONSIBILITY FOR ALL OTHER PLANS
AND DOCUMENTS SHALL BE THE RESPONSIBILITY OF THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED
FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

QTY COMMENTS
1 NO
7/29/10
REVISION DESCRIPTION



DRAINAGE AREA CALCULATIONS				100 YEAR	
DA#	AREA (AC)	% IMP.	PI	Q (CFS)	STRUCT. #
A	8.44	MULTI	5.21	43.97	PERQUE
B	0.79	COMM.	6.08	4.80	BELLEAU
C	4.45	5	2.95	13.13	BELLEAU
D	1.58	5	2.95	4.66	BELLEAU
E	3.00	COMM.	6.08	18.24	PERQUE
F	2.48	COMM.	6.08	15.08	PERQUE

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204 NORTH MAIN STREET
O'FALLON, MO. 63366

MIKE E.
VONDERHEIDE
NUMBER
E-23077

STATE OF MICHIGAN
REGISTERED PROFESSIONAL ENGINEER

CONTACT: ROB LOCHNER - PHONE: (636) 561-9300

[illegible]

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