RESOLUTION NO. 2025-____

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF MERCED, CALIFORNIA, ASSURING TIMELY DELIVERY FOR THE 2025 CONGESTION MITIGATION AND AIR QUALITY (CMAQ) PROGRAM APPLICATIONS WITH MERCED ASSOCIATION OF GOVERNMENTS (MCAG)

WHEREAS, the City of Merced is eligible to receive Federal and/or State funding for certain transportation projects through the California Department of Transportation; and,

WHEREAS, Merced Association of Governments issued a call for projects for the next round of Congestion Mitigation and Air Quality (CMAQ), and Carbon Reduction Program (CRP) projects in August 2025; and,

WHEREAS, on November 3, 2025, City Council directed staff to apply for one sidewalk project in the City of Merced for the Congestion Mitigation and Air Quality (CMAQ) Program; and,

WHEREAS, Merced Association of Governments requires project assurance for timely delivery of programmed projects.

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF MERCED DOES HEREBY RESOLVE, DETERMINE, FIND, AND ORDER AS FOLLOWS:

SECTION 1. That the City of Merced authorizes one application to MCAG for the 2025 Congestion Mitigation and Air Quality Call for Projects as described in Attachments A.

SECTION 2. That the City of Merced assures Timely Delivery of said Programmed Project, as described in Attachments A.

/ / /

/ / /

PASSED AND ADOPTED by the City Council of the City of Merced at a regular meeting held on the ____ day of _____ 2025, by the following vote:

AYES: Council Members:

NOES: Council Members:

ABSENT: Council Members:

ABSTAIN: Council Members:

APPROVED:
MATTHEW SERRATTO, MAYOR

_____
Mayor

ATTEST:
D. SCOTT MCBRIDE, CITY CLERK

BY:_____
Assistant/Deputy City Clerk

(SEAL)

APPROVED AS TO FORM:
CRAIG J. CORNWELL, CITY ATTORNEY

Craig Cornwell 10/8/2025
City Attorney Date

X:\Resolutions\2025\Engineering\CMAQ Resolution 2025.docx

Attachment A

Congestion Mitigation & Air Quality (CMAQ) Program

and

Carbon Reduction Program (CRP)

Application Packet

August 22, 2025

Contact:
Christopher Winkels
Christopher.winkels@mcagov.org
209-723-3153 ext. 127

Application deadline:

October 24, 2025

Merced County Association of Governments
369 West 18th Street
Merced, CA 95340
209-723-3153
http://www.mcagov.org

Introduction and Timeline

The Merced County Association of Governments (MCAG) is issuing a Call for Projects for the Congestion Mitigation and Air Quality (CMAQ) Program. MCAG's seven member agencies (the cites of Atwater, Dos Palos, Gustine, Livingston, Los Banos, Merced and Merced County) and the region's two public transit agencies (the Transit Joint Powers Authority for Merced County and Yosemite Area Regional Transportation System) may apply. There is approximately $8 million available for this call for projects.

CMAQ projects must document their emissions reductions and they must be able to meet all federal project requirements. It is important to note that even if only one phase is federally funded, the entire project and all phases must meet federal requirements. There are a number of requirements for federal projects, such as federal environmental clearance, required bidding processes, and much more. Projects must be programmed in the Federal Transportation Improvement Program (FTIP) and must obtain federal funding obligation (E-76) before bidding any federally-funded project phases and in order to be reimbursed for incurred, eligible costs.

Local agencies will work with Caltrans on implementation of projects once they are authorized and programmed by the MCAG Board. MCAG approves projects based on local scoring criteria and the information in project applications; project specific requirements and project eligibility will ultimately be determined by Caltrans on behalf of the US DOT.

Agencies may submit multiple projects. The CMAQ committee will evaluate and score the projects and make a recommendation of projects for programming. If your project was on a waiting list from the last call for projects and did not get programmed it does **not** carry over – you must apply again. The Governing Board is expected to consider projects for award in December 2025.

Project applications are due by 5 pm on October 24, 2025.

About CMAQ

The Congestion Mitigation and Air Quality (CMAQ) Improvement Program is a federal funding program. The purpose of the program is to fund transportation projects or programs that will contribute to attainment or maintenance of National Ambient Air Quality Standards (NAAQS). Funding can be expended on projects to reduce ozone and particulate matter and precursor emissions – nitrogen oxides (NOx), volatile organic compounds (VOC), and particulate matter (PM).

Information about the program can be found on the US DOT website here:
https://www.fhwa.dot.gov/environment/air_quality/cmaq/

The most recent program guidance was published in 2013 and can be found here:
https://www.fhwa.dot.gov/environment/air_quality/cmaq/policy_and_guidance/2013_guidance/cmaq2013.pdf

Eligible Projects

Some examples of eligible projects include:

- Traffic flow improvements (e.g. roundabout, signal synchronization, etc.);
- Bicycle and pedestrian projects;
- Electric vehicle charging stations;
- Ridesharing, carpooling, and vanpooling projects/programs; and
- Transit service expansion and transit capital.

Examples of ineligible projects:

- Projects that add new capacity for single-occupancy vehicles;
- Maintenance and rehabilitation / reconstruction projects, including rehabilitation of existing bicycle lanes.

Cost-Effectiveness Policy

Since 2011, all San Joaquin Valley Metropolitan Planning Organizations (MPOs), including MCAG, adopted policies for distributing at least 20% of CMAQ funds to projects that meet a cost-effectiveness threshold for emission reductions. The cost-effectiveness threshold is periodically updated and is currently $88 per pound. Projects meeting this threshold (≤ $88/lb.) will receive 20 points during application scoring. If there is a shortage of projects that meet this threshold, then the funding shortfall will remain unprogrammed and available for future/additional projects that can use those funds.

The base methodology for calculating cost-effectiveness is the 2005 ARB "Methods to Fund the Cost-Effectiveness of Funding Air Quality Projects". This report is available here: https://ww2.arb.ca.gov/sites/default/files/classic/stcd/CMAQ%20EFs/Cost%20Effectiveness%20Tables%202024%20final.pdf . Since the methodologies are approaching twenty years old and some project types are outdated, the California Air Resources Board (CARB) updates the emissions factors every year or two. New emissions factors must be used as inputs into the methodology to calculate the cost-effectiveness of projects. The most recent emissions factors were adopted in September 2024 and are integrated into the emissions spreadsheets.

Utilizing this ARB cost-effectiveness methodology and the most current emission factor tables, staff has prepared a standardized spreadsheet for applicants to use. The result should be submitted along with the application.

Other methodology may be used for projects not included in the guidance upon review by MCAG staff. It is important that inputs into projects are reasonable and that projects can be reviewed against one another fairly. Cost-effectiveness for CMAQ projects should be expressed as dollars spent per pound of pollutant reduced. Cost-effectiveness is based on CMAQ dollars only (not total project cost).

Example Formula

Cost-Effectiveness = (Capital Recovery Factor * CMAQ Funding) / (ROG + NOx + PM2.5 + PM10)

Policies and Procedures for Programming CMAQ Funds

The updated Policies and Procedures were adopted by the MCAG Governing Board at the August 2024 meeting. They are available on MCAG's CMAQ webpage: https://www.mcagov.org/218/Congestion-Mitigation-and-Air-Quality

Application Requirements

All project applications must document all of the following information:

- Project's total cost and CMAQ cost, by phase and by year;
- Engineer's Estimate;
- Cost-effectiveness of CMAQ dollars;
- Project map/depiction;
- Project schedule;
- Proof of public vetting; and
- Assurance of timely delivery of programmed projects (via board/city council action). This must be received prior to MCAG Governing Board approval of projects on December 18, 2025. It is not required in order to submit project applications by October 24th.

Application Scoring

Staff will review and assess project applications for their completeness and CMAQ eligibility. The CMAQ Scoring Committee will evaluate and score project applications. The following scoring factors will be used to rank the project applications:

- Cost-effectiveness: 20 points
  - Priority is given to Highly Cost-Effective projects (≤ $88/lb.)
  - The full 20 points will be awarded to projects that score $88/lb or better, with the following exceptions:
    - There is limited funding available for PM_{10} projects (dust-reducing projects such as paving alleyways or road shoulders). There are a number of reasons for this. PM_{10} is no longer a primary pollutant in the San Joaquin Valley air basin; great strides have been made in PM_{10} reduction over the last few decades and instead of being out of compliance with federal standards we are in attainment for the pollutant. Federal regulations set a floor for funding that must be directed to projects that reduce PM2.5 specifically. Also, scoring criteria by particle weight gives a disproportionate advantage to these project types.
    - Street sweepers with emissions calculations relying on PM_{10} reductions will be included in this project-type limit. Street sweepers may reduce both PM_{10} and $PM_{2.5}$ so it is possible that they can be funded on PM2.5 emissions alone.

- Vehicle Miles Traveled Reduction: 10 points
  - Reduction of Vehicle Miles Traveled (VMT) results in reduction of GHG emissions

- Benefits Disadvantaged Community: 10 points
  - See https://calepa.ca.gov/EnvJustice/GHGInvest/
  - Partial points could be awarded if:
    - project location is partially in a disadvantaged community,

        - if not in a disadvantaged community, but benefits to one which could be explained.

- Subjective Evaluation: 15 points
    - Such considerations may include, but are not limited to: connectivity, accessibility, improving quality of life, and supportive of economic activity.

- Safety: 10 Points
    - Project implements transportation safety measures to increase transportation safety for travelers such as drivers, cyclists, and pedestrians.

- Project Readiness: 10 Points
    - Considerations may include, but are not limited to: Right of Way Acquisition, other sources of funding, coordination with corporate or governmental agencies, etc.

Scoring Committee

The scoring committee consists of one representative from each of the following agencies:

- City of Atwater;
- City of Dos Palos;
- City of Gustine;
- City of Livingston;
- City of Los Banos;
- City of Merced;
- County of Merced;
- Caltrans District 10; and
- MCAG.

Schedule

The following is the tentative/anticipated schedule:

August 21	Approve Policies and Procedures and authorize Call for Projects
August 22	Release Call for Projects
October 24	Deadline for applications
Week of November 10	CMAQ committee evaluates applications
December 18	Governing Board action (estimated)

CMAQ/CRP Project Application

Applications must be received by 5 pm October 24, 2025.
Submit an electronic copy to:

planning@mcagov.org

Agency (project applicant):

City of Merced

Project Title:

Childs Ave and Canal Street Sidewalks

Project Point of Contact (name, title, email, and phone #):

Joe Cardoso, City Surveyor, cardosoj@cityofmerced.gov, 209-388-7508

Project Description:

The City of Merced proposed to install pedestrian improvements along the west side of Canal Street and the south side of Canal Street.

The project scope would include installing approximately 850 feet of sidewalk on Canal Street and approximately 950 feet on Childs Avenue. This would also include installing adding street striping, crosswalks, street signs, access ramps, streetlights, shoulder paving, and drainage.

The project is within the City right-of-way and includes some minor utility relocations such as utility service pole, telephone riser and raise utility boxes to grade.

Project Cost ($):

	CMAQ (88.53% Max.)	**Other** (if any)	**Local** (11.47% Min.)	**Total**
Prelim. Engineering (PE)				
Right-of-Way (R/W)				
Construction	$951,817		$1,100,000	
TOTAL				

Please add an asterisk to your CMAQ cost if it has already been awarded and programmed. For example, if your PE has already been awarded, denote it as $100,000* in the CMAQ column. For new funding requests, do not add the asterisk.

Source of Other funds, if any:

Source of Local funds: $689,805 is budgeted through LTF and $410,195 will be provided by Measure V and SB1. The City is funding approximately 53.61% of this project through local funds. See Attachment A for additional information.

Please add additional pages or backup as needed.

Project Schedule:

When will you be ready to begin each phase? For federally-funded phases when will you be ready to submit your Request for Authorization (RFA) or FTA transfer to Caltrans? These will be your committed project implementation dates. Include all phases that apply to your project regardless of funding source.

	Start Month/Year	Estimated Completion Month/Year
Prelim. Engineering (PE)	1/2026	5/2026
Right-of-Way (R/W)	N/A	n/A
Construction	9/2026	03/2027

Project Cost-Effectiveness (in dollars/pound) (attach calculations):

$651 (see attached)

Additional Information (attach more sheets if needed). Projects will be evaluated subjectively based on this supporting information:

The Childs and Canal Infrastructure Project has been a priority for the City of Merced for several years. It has been discussed at many City Council meetings and identified as a critical project on the City Council's annual goals and priorities. The City submitted this project for federal earmark funding in 2023, 2024, and 2025, showing its continued commitment to moving the project forward. Letters of support from the Merced City School District, the Merced County Association of Governments, and South Merced community members demonstrate strong local and regional backing. This support reflects a shared goal to improve safety, access, and quality of life for residents in South Merced. See Attachment A for further information.

Proof of Public Vetting:

The Childs and Canal Infrastructure Project has undergone extensive public vetting through multiple City Council and Planning Commission meetings, as well as community town hall meetings. These discussions have provided opportunities for public input and have consistently emphasized the community's priority to make the area safer for both motorists and pedestrians. The continued dialogue and engagement demonstrate broad public awareness, support, and involvement in shaping this critical infrastructure project.

Assurance of Project Delivery by Formal Board/City Council Action? If this is completed please enter 'YES' and attach documentation. If not, please enter 'NO' and provide the date this will be provided. (Must be provided before November 20, 2025).

No. The resolution is scheduled for City Council approval on November 3, 2025.

ATTACHEMENT A

COST- EFFECTIVENESS

The proposed project currently has budgeted $689,805 of LTF funding. The additional $410,195 will be provided by Measure V and SB1. The City will fund approximately 53.61% of the project using local funds and is requesting that approximately 46.38% of the sidewalk portion be funded through CMAQ.

The total cost of the project is $2,051,817.

- **CMAQ will fund $951,817 which include the following:**
    - Clear & Grubbing, remove curb & gutter, existing sidewalk signs.
    - Install sidewalks, curb & gutter, access ramps, construct driveways, install streetlights and connect to power and portions of permits bonds & insurance, public safety, restoration, and surveying.
- **City funds will fund $1,100,000 which include the following:**
    - Remove existing pavement.
    - Install asphalt pavement, catch basins, HDPE storm drains, raise utilities to grade, remove tree, monumentation, and portions of permits bonds & insurance, public safety, restoration, and surveying.

VEHICAL MILES TRAVELED

Canal Street is a two-lane local road with dirt shoulders on the east side. Childs Avenue is also a two-lane road but is classified as a collector road with dirt shoulders on the south side.

Canal Street and Childs Avenue offset creating an unsafe intersection for pedestrians and vehicular traffic. This project will allow the City to provide a safe place for bicyclist, pedestrians and improve the flow of traffic by eliminating the off-set intersections.

BENEFITS DISADVANTAGE COMMUNITY

The City of Merced is recognized as an Entitlement City under the U.S. Department of Housing and Urban Development (HUD) and qualifies as a disadvantaged community based on state and federal criteria. With a diverse population and areas experiencing economic hardship, Merced faces challenges related to income inequality, limited access to resources, and infrastructure needs. These factors underscore the importance of continued investment through programs like the CMAQ grant to enhance public engagement, improve air quality, and support equitable community development across all neighborhoods.

SUBJECTIVE EVAUATION

- The project will install approximately 850 feet of sidewalk on Canal Street and approximately 950 feet on Childs Ave.
- Improved access to vital amidites to nearby health centers, schools, cemeteries, and the County Fair Grounds.
- Enhance overall walkability and promote a healthier lifestyle.

SAFETY

- This project will create a safe, dedicated passage for pedestrians and bicyclists, physically separating them from vehicular traffic to reduce the risk of collisions.
- It will enhance safety for school children traveling to and from Alicia Reyes Elementary School by providing secure, accessible routes.
- The project will realign Canal Street with the north segment of Canal Street, eliminating the current offset that causes long vehicle idle times and unsafe crossing conditions, improving overall traffic safety for motorists and pedestrians alike.

PROJECT READINESS

- In November 2023, the City retained our LAPM Chapter 10 vetted on-call civil engineers and hired NorthStar Engineering Group to design the Childs and Canal Infrastructure Project. The design contract is funded through Local Transportation Funds (LTF) for $134,361.34.
- To date, the 60 percent design plans have been completed and are currently under review by City staff.
- If the project receives funding, we anticipate bidding it in early Summer 2026, or as soon as the required right-of-way certification is obtained.

ATTACHEMENT B

(Project Photos)

Intersection of Childs Ave and Canal Street looking east towards State Route 59.

Intersection of Childs Ave and Canal Street looking west towards Alicia Reyes Elementary School.

Childs Avenue looking east towards State Route 59.

Childs Ave at the intersection on of State Route 59.

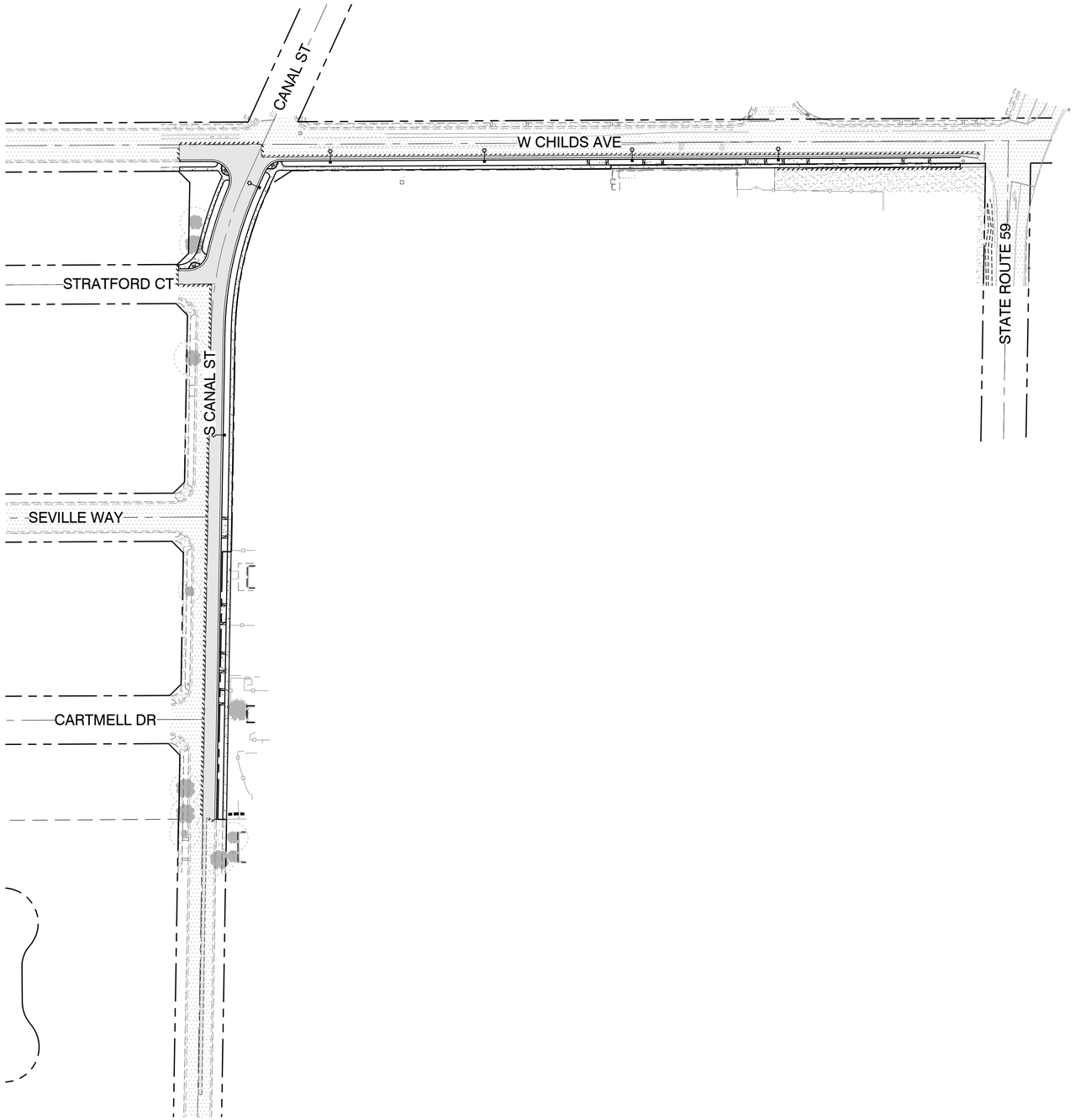
Canal Street looking south.

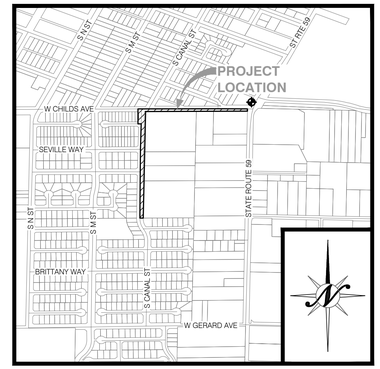
Canal Street looking north towards Childs Ave from the southerly portion of the project.

CIVIL IMPROVEMENT PLANS FOR

CANAL STREET AND CHILDS AVENUE

MERCED, CALIFORNIA

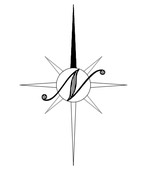




VICINITY MAP
NTS

BENCHMARK

ELEVATION:	166.51
BM	1" BRASS DISK IN TOP OF CURB ON WEST SIDE OF STATE ROUTE 59, APPROXIMATELY 50' NORTH OF INTERSECTION WITH W. CHILDS AVENUE



80 40 0 80
1" = 80'

CONTACTS

A. OWNER/DEVELOPER:	CITY OF MERCED 678 W 18TH STREET MERCED, CA. 95340
B. PROJECT LOCATION:	CANAL STREET AND CHILDS AVENUE MERCED, CA. 95341
C. ENGINEER:	NORTHSTAR ENGINEERING GROUP, INC. 620 12TH STREET MODESTO, CA. 95354 T: (209) 524-3525 F: (209) 524-3526 CONTACT: CHRIS VANDERVEEN

SHEET INDEX

CALL BEFORE YOU DIG 811 USA 800-227-2600

REGISTERED PROFESSIONAL ENGINEER CHRISTOPHER G. VANDERVEEN No. 43181 CIVIL STATE OF CALIFORNIA

PRELIMINARY NOT FOR CONSTRUCTION

NO.	DESCRIPTIONS	DATE	APPROVED

REVISIONS

COVER SHEET

CIVIL IMPROVEMENT PLANS FOR
CANAL STREET AND CHILDS AVENUE
MERCED, CALIFORNIA

North Star Engineering Group, Inc.
• CIVIL ENGINEERING • SURVEYING • PLANNING •
620 12th Street Modesto, CA 95354
(209) 524-3525 Phone (209) 524-3526 Fax

JOB #:	23-3406
DATE:	06/30/2025
SCALE:	AS SHOWN
DRAWN:	TT
DESIGN:	CVV
CHK'D:	CVV

SHEET NUMBER

C1.1

PLOTTED: 06/30/2025 16:52 PLOTTED BY: Tayleen
DWG NAME: T:\23-3406 City of Merced Canal St & Childs Ave Project\Civil\Imp Plans\C1.1 CVR.dwg

LEGEND

	EXISTING	PROPOSED
BOUNDARY LINE		
CENTERLINE		
RIGHT-OF-WAY		
LOT LINE		
SECTION LINE		N/A
EASEMENT		
RIGHT-OF-WAY EASEMENT		
SETBACK LINE	N/A	
RESTRICTED ACCESS		
CENTERLINE STATION POINT		
MONUMENT		
PROPERTY CORNER		
BENCHMARK		
TREE		
BOULDER		N/A
STUMP		N/A
CONCRETE		
CURB + GUTTER		
ACCESSIBLE RAMP		
DETECTABLE WARNING SURFACE		
EDGE OF PAVEMENT		
BUILDING OVERHEAD		
RAILROAD		
BUILDING		
WHEEL STOP		
HANDRAIL		
BOLLARD	N/A	
DOOR		
VALLEY GUTTER		
WALL		
WALL		
RETAINING WALL		
FENCE - CHAINLINK/VINYL/CABLE		
FENCE - WOOD/METAL/STEEL		
FENCE - BARBED WIRE		
FENCE - PICKET		
FENCE - SPLIT RAIL		N/A
FENCE - HOGWIRE		
BARRICADE		
GUARDRAIL		N/A
ROLLING GATE		
SWING GATE		N/A
TRENCH		N/A
SAWCUT		N/A
UTILITY REMOVAL		N/A
CONTOUR - MAJOR	32	32
CONTOUR - MINOR	32	32
DAYLIGHT CUT	N/A	
DAYLIGHT FILL	N/A	
GRADE BREAK		
PAD ELEVATION	10.0	10.0
SLOPE	0.00%	0.00%
ELEVATION TAG	00.00 CC	00.00 CC
TOE OF SLOPE		
HIGH POINT		
SIGN		
SINGLE LINE		
DOUBLE LINE		
STOP BAR/CROSSWALK		
DASHED LINE		
DOUBLE DASHED LINE		
MANHOLE		
MAILBOX		
UTILITY STRUCTURE		
WATER VALVE		
WATER METER		
BLOW OFF VALVE		
BACKFLOW PREVENTER		
DOUBLE CHECK DETECTOR ASSEMBLY		
FIRE HYDRANT		
MONITORING WELL		
AIR RELEASE VALVE		

	EXISTING	PROPOSED
WATER WELL	W	W
WATER (DOMESTIC)	6"W	8"W
WATER (NON-POTABLE WATER)	6"NPW	8"NPW
WATER (FIRE SERVICE)	6"FS	8"FS
WATER STRUCTURE ID	N/A	FH-1
IRRIGATION MANHOLE	IM	IM
IRRIGATION METER	BFP	BFP
BACKFLOW PREVENTER	ICB	ICB
IRRIGATION CONTROL BOX	ICV	ICV
IRRIGATION CONTROL VALVE		
IRRIGATION LINE	12"IRR	12"IRR
GAS VALVE	GV	GV
GAS METER	GM	GM
GAS LINE	4"G	GAS 4"G
ELECTROLIER		
SITE LIGHTING		
TRAFFIC SIGNAL		N/A
TRAFFIC SIGNAL WITH STREET LIGHT		N/A
UTILITY POLE	UP	UP
UTILITY POLE WITH LIGHT	UP	UP
WIRE ANCHOR		N/A
UTILITY BOX	UTL	UTL
TELEPHONE MAINTENANCE HOLE		
ELECTRIC MAINTENANCE HOLE		
CABLE MAINTENANCE HOLE		
TRANSFORMER		
OUTLET		N/A
UTILITY VALVE	UTL	UTL
JOINT TRENCH	JT	JT
OVERHEAD ELECTRICAL	OHE	OHE
TELEVISION/CABLE	TV	TV
UNDERGROUND ELECTRICAL	UG	UG
TELEPHONE	TEL	TEL
ELECTRICAL	E	E
MISCELLANEOUS UTILITY	U	U
SEWER MANHOLE		
ECCENTRIC SEWER MANHOLE		
SEWER CLEAN OUT		
SEPTIC TANK		
SEWER STRUCTURE ID	N/A	MH-1
SEWER (MAIN)	6"SS	12"SS
SEWER (LATERAL)	N/A	
SEWER (FORCE MAIN)	6"FM	12"SSFM
STORM DRAIN MANHOLE		
DEWATERING MANHOLE		
ECCENTRIC MANHOLE		
STORM DRAIN CLEAN OUT		
CURB INLET		
DRAIN INLET		
DRAIN INLET ON MANHOLE		
STORM DRAIN STRUCTURE ID	N/A	SDMH
RAINWATER LEADER	RWL	RWL
RIPRAP (ROCK DISCHARGE PAD)		
STORM DRAIN	6"SD	12"SD
STORM DRAIN TRENCH DRAIN		
SWALE		
STORM DRAIN (LANDSCAPE SERVICES)	N/A	
ROCK TRENCH		
FRENCH DRAIN	N/A	
CULVERT		

ABBREVIATIONS

±	PLUS OR MINUS (NOT EXACT)	JB	JUNCTION BOX	USA-B	WATER (BLUE)
@	AT	JP	JUNCTION POLE	USA-G	SEWER/STORM DRAIN (GREEN)
Ø	DIAMETER	JT	JOINT TRENCH	USA-M	TEMPORARY SURVEY MARKINGS (MAGENTA)
AB	AGGREGATE BASE	JP	JOINT POLE	USA-O	COMMUNICATION CATV (ORANGE)
ABDN	ABANDONED	L, LT	LEFT	USA-P	RECLAIMED WATER IRR. SLURRY (PURPLE)
AC	ACRE, ASPHALT CONCRETE	L=	LENGTH (CURVE)	USA-R	ELECTRICAL (RED)
A/C	AIR CONDITIONING	LF	LINEAL/LINEAR FEET	USA-W	PROPOSED EXCAVATION (WHITE)
ACP	ASBESTOS CEMENT PIPE	LAT	LATERAL	USA-Y	GAS, OIL, STEAM (YELLOW)
ACM	ASBESTOS CONTAINING MATERIAL	LIP	LIP OF GUTTER	VC	VERTICAL CURVE
AD	AREA DRAIN	LN	LANE	VCP	VITRIFIED CLAY PIPE
ADA	AMERICANS W/ DISABILITIES ACT	LP	LIGHT POLE, LOW POINT	VERT	VERTICAL
AG	ATRIUM GRATE	FH	FIRE-HYDRANT	W	WEST, WATER
AGG	AGGREGATE	LS	LANDSCAPE	W/	WITH
ALGN	ALIGNMENT	LSA	LANDSCAPE ARCHITECT	WA	WALL
ALT	ALTERNATE	MA	MEDICAL AIR	WB	WATER BOX
APN	ASSESSORS PARCEL NUMBER	MAX	MAXIMUM	WM	WATER METER
ARV	AIR RELEASE VALVE	MC	MERCED COUNTY	WMB	WATER METER BOX
ASB	AGGREGATE SUBBASE	MEP	MECHANICAL/ELECTRICAL/PLUMBING	WOA	WASHOUT AREA
ASPH	ASPHALT	MH	MAN/MAINTENANCE HOLE	WS	WATER SERVICE
ASR	AUTOMATIC SPRINKLER RISER	MID	MERCED IRRIGATION DISTRICT	WV	WATER VALVE
BC	BEGIN CURVE	MIN	MINIMUM	WW	WATER WELL
BDRY	BOUNDARY	MIPT	MALE IRON PIPE THREAD	WWF	WELDED WIRE FABRIC
BFP	BACK FLOW PREVENTOR	MJ	MECHANICAL JOINT	WY	WAY
BK	BOOK	MPVC	MIDPOINT OF VERTICAL CURVE	YD	YARD
BLDC	BUILDING CORNER	MON	MONUMENT		
BLDG	BUILDING	MS	MOW STRIP		
BMP	BEST MANAGEMENT PRACTICES	MW	MONITORING WELL		
BM	BENCHMARK	N	NORTH, NORTHING COORDINATE		
BO	BLOW OFF	(N)	NEW		
BOD	BOTTOM OF DOCK	NDS	NDS INC. (MANUFACTURER)		
BOL	BOLLARD	NIC	NOT INCLUDED/IN CONTRACT		
BOW	BACK OF WALK	NO	NUMBER		
BSW	BACK OF SIDEWALK	NSE	NORTHSTAR ENGINEERING		
BS	BEGIN STRIPING	NTS	NOT TO SCALE		
BSL	BUILDING SETBACK LINE	OC	ON CENTER		
BVC	BEGIN VERTICAL CURVE	OG	ORIGINAL GROUND / GRADE		
BW	FINISHED GRADE AT BOTTOM OF WALL	OHE	OVERHEAD ELECTRICAL		
C	CIVIL	O.R.	OFFICIAL RECORDS		
CC	CONCRETE	(P)	PROPOSED		
CB	CATCH BASIN	P, PAV	PAVEMENT		
CBL	CABLE	PB	PULL BOX		
CDS	CONTINUOUS DEFLECTION	PCC	POINT OF COMPOUND/CONVERSE CURVATURE		
CG/C&G	CURB AND GUTTER	PCC	PORTLAND CEMENT CONCRETE		
CG&S	CURB, GUTTER & SIDEWALK	PE	PLAIN END		
CI	CAST IRON/CURB INLET	PED	PEDESTRIAN		
CIP	CAST IRON PIPE	PERF	PERFORATED		
℄ OR CL	CENTER LINE	PG	PAGE		
CLR	CLEAR	PG&E	PACIFIC GAS AND ELECTRIC		
CMH	CABLE MAINTENANCE HOLE	PH	POTHOLE		
CMN	COMMUNICATION	PID	POINT ID		
CMP	CORRUGATED METAL PIPE	PIV	POST/PRESSURE INDICATOR VALVE		
CO	CLEAN OUT	PL	PROPERTY LINE		
COM OR C.O.M.	CITY OF MERCED	PM	PARKING METER, PARCEL MAP		
COMP.	COMPACTION	PMH	POWER MANHOLE		
CONC OR CC	CONCRETE	PO	PUSH-ON		
CONST	CONSTRUCTION OR CONSTRUCT	POC	POINT ON CURVE/POINT OF CONNECTION		
CONF	CONFORM TO EXISTING	POI	POINT OF INTERSECTION		
CR	CURB/CROWN	PP	POWER POLE		
CT.	COURT/CUBIC	PRC	POINT OF REVERSE CURVATURE		
CU	CULVERT	PROF	PROFILE		
CV	CHECK VALVE	PRV	PRESSURE REDUCING VALVE		
CY	CUBIC YARD	PRUE	PRIVATE UTILITY EASEMENT		
D=	DELTA (CURVE)	PT	POINT		
DCDA	DOUBLE CHECK DETECTOR ASSEMBLY	PT&T	PACIFIC TELEPHONE & TELEGRAPH		
DEMO	DEMOLISH	PUE	PUBLIC UTILITY EASEMENT		
DEPT	DEPARTMENT	PVC	POLYVINYL CHLORIDE PIPE		
DI	DROP/DRAIN INLET/DUCTILE IRON	R	RIGHT		
DIA	DIAMETER	R=	RADIUS		
DIP	DUCTILE IRON PIPE	RC	RELATIVE COMPACTION		
DOM, (DOM)	DOMESTIC	RCP	REINFORCED CONCRETE PIPE		
DR	DRIVE	RD	ROAD, RELATIVE DENSITY		
DS	DOWNSPOUT	RJ	RESTRAINED JOINT		
DTL	DETAIL	RP	RADIUS POINT		
DW	DOMESTIC WATER/DRYWELL/DEWATERING	RPPA	REDUCED PRESSURE PRINCIPLE ASSEMBLY		
DWG	DRAWING	RSC	RECEIVING AND SUPPORT CENTER		
DWY	DRIVEWAY	RV	RESISTANCE VALUE		
DYL	DOUBLE YELLOW LINE	RW	RECYCLED WATER		
E	EAST/EASTING COORDINATE/ELECTRIC	RW, R/W, ROW	RIGHT-OF-WAY		
(E)	EXISTING	RWL	RAINWATER LEADER		
EC	END CURVE	S	SOUTH, SLOPE		
EG	EXISTING GRADE	S.A.D.	SEE ARCHITECTURAL DRAWINGS		
EL, ELEV	ELEVATION	SBL	SETBACK LINE, SOLID BLACK LINE		
ELB	ELECTRIC BOX	SCO	SEWER CLEANOUT		
ELC/ELEC	ELECTRICAL	SD	STORM DRAIN		
ELV	ELECTRIC VAULT	SDB	STORM DRAIN BASIN		
EM	ELECTRIC METER	SDCB	STORM DRAIN CATCH BASIN		
EMH	ELECTRIC MAINTENANCE HOLE	SDCO	STORM DRAIN CLEAN OUT		
EP	EDGE OF PAVEMENT	SDDW	STORM DRAIN DEWATERING		
ES	END STRIPING	SDI	STORM DRAIN INLET		
ESMT OR EASE	EASEMENT	SDFM	STORM DRAIN FORCE MAIN		
EVC	END OF VERTICAL CURVE	SDMH	STORM DRAIN MAINTENANCE HOLE		
EX OR EXIST	EXISTING	S.E.D.	SEE ELECTRICAL DRAWINGS		
EVA	EMERGENCY VEHICLE ACCESS	SG	SUB-GRADE		
(F)	FUTURE	SF	SILT FENCE SG SUBGRADE		
FA	FIRE ALARM	SHT	SHEET		
FAB	FIRE ALARM BOX	SIM	SIMILAR		
FC, F/C	FACE OF CURB	SL	STREET LIGHT		
FD	FOUND/FRENCH DRAIN	S.L.D.	SEE LANDSCAPE DRAWINGS		
FDC	FIRE DEPARTMENT CONNECTION	SLB	STREET LIGHT BOX		
FE	FENCE	SMH	SIGNAL MANHOLE		
FES	FLARED END SECTION	S.M.D.	SEE MECHANICAL DRAWINGS		
FF	FINISH FLOOR	SNS	STREET NAME SIGN		
FFE	FINISH FLOOR ELEVATION	SP	SERVICE POLE		
FG	FINISH GRADE	S.P.D	SEE PLUMBING DRAWINGS		
FH	FIRE HYDRANT	SRL	SOLID RED LINE		
FIPT	FEMALE IRON PIPE THREAD	SS	SANITARY SEWER		
FL	FLOW LINE/FLANGE	SSCO	SANITARY SEWER CLEAN OUT		
FLG	FLANGE	SSFM	SANITARY SEWER FORCE MAIN		
FM	FLOWMETER/FORCE MAIN	SSMH	SANITARY SEWER MAN/MAINTENANCE HOLE		
FOUND	FOUNDATION	SSPS	SANITARY SEWER PUMP STATION		
FS	FINISHED SURFACE, FIRE SERVICE	ST	STREET, SEPTIC TANK		
FSR	FIRE SPRINKLER RISER	STA	STATION		
FT	FOOT, FEET	STD	STANDARD		
FW	FIRE WATER	STL	STEEL		
G	GAS, GROUND	S/W, SW	SIDEWALK		
GB	GRADE BREAK	SWL	SOLID WHITE LINE, SWALE		
GE	GROUND ELEVATION	T	TELEPHONE		
GI	GALVANIZED IRON	TC	TOP OF CURB		
GM	GAS METER	TBC	TOP BACK OF CURB		
GR	GRATE	TCP	TEMPORARY CONTROL POINT		
GRD	GROUND	TD	TRENCH DRAIN		
GS	GROUND SHOT ELEVATION	TEL	TELEPHONE		
GUY	GUY/GUIDE LINE	TELB	TELEPHONE BOX		
GV	GAS VALVE	TELV	TELEPHONE VAULT		
H2O	WATER	TEMP	TEMPORARY		
HB	HOSE BIB	TFC	TOP FACE OF GRATE		
HMA	HOT MIX ASPHALT	TG	TOP OF GRATE		
HORIZ	HORIZONTAL	TH	THRESHOLD		
HT	HEIGHT	THK	THICK		
HP	HIGH POINT	TI	TRAFFIC INDEX		
HPS	HIGH PRESSURE SODIUM/SYSTEM	TMH	TELEPHONE MAINTENANCE HOLE		
HT	HEIGHT	TOD	TOP OF DOCK		
HWY	HIGHWAY	TOW	TOP OF WALL		
HWL	HIGH WATER LINE	TP	TELEPHONE POLE, TEST PIT		
IBX	IRRIGATION BOX	TPE	TREE PLANTING EASEMENT		
ICB	IRRIGATION CONTROL BOX	TS	TRAFFIC SIGNAL		
ICV	IRRIGATION CONTROL VALVE	TSB	TRAFFIC SIGNAL BOX		
IHW	IRRIGATION HEADWALL	TSCE	TEMPORARY STABILIZED CONSTRUCTION ENTRANCE		
IM	IRRIGATION METER	TSP	TRAFFIC SIGNAL POLE		
IMH	IRRIGATION MAINTENANCE HOLE	TV	TELEVISION		
ID	INSIDE DIAMETER	TVR	CABLE TV RISER		
INV	INVERT	TYP	TYPICAL		
INST	INSTALL	U/UTIL/UTL	UTILITY		
IRR	IRRIGATION	UG, U/G	UNDERGROUND		
ISP	IRRIGATION STAND PIPE	UON	UNLESS OTHERWISE NOTED		
IV	IRRIGATION VALVE	UOS	UNLESS OTHERWISE SPECIFIED		

CALL BEFORE YOU DIG 811 USA 800-227-2600

REGISTERED PROFESSIONAL ENGINEER TIMOTHY TAYLOR No. 81438 PRELIMINARY NOT FOR CONSTRUCTION STATE OF CALIFORNIA

REVISIONS			
NO.	DESCRIPTIONS	DATE	APPROVED

LEGENDS AND ABBREVIATIONS

CIVIL IMPROVEMENT PLANS FOR
CANAL STREET AND CHILDS AVENUE
MERCED, CALIFORNIA

North Star Engineering Group, Inc.
• CIVIL ENGINEERING • SURVEYING • PLANNING •
620 12th Street Modesto, CA 95354
(209) 524-3525 Phone (209) 524-3526 Fax

JOB #:	23-3406
DATE:	06/30/2025
SCALE:	AS SHOWN
DRAWN:	TT
DESIGN:	CW
CHKD:	CW

SHEET NUMBER

C1.2

PLOTTED: 06/30/2025 16:53 PLOTTED BY: Taylam
DWGNAME: I:\23-3406 City of Merced Canal St & Childs Ave Project\Civil\Imp Plans\C1.2 L&A.dwg

GENERAL NOTES

1. CONTRACTOR SHALL BE AWARE THAT THE FOLLOWING NOTES LISTED BELOW ARE NORTHSTAR ENGINEERING GROUP'S TYPICAL GENERAL NOTES AND SOME NOTES MAY NOT BE APPLICABLE TO THIS PLAN SET.

2. ALL IMPROVEMENTS SHALL BE CONSTRUCTED IN STRICT ACCORDANCE WITH THE FOLLOWING: CITY OF MERCED STANDARD SPECIFICATIONS ("CITY") AND THE LATEST EDITION OF THE CALIFORNIA BUILDING CODE. WHERE THERE IS A CONFLICT BETWEEN THE PLANS AND THE CITY AND/OR CALIFORNIA BUILDING CODE STANDARDS, THE CITY AND/OR CALIFORNIA BUILDING CODE STANDARDS SHALL PREVAIL. ALL WORK SHALL BE SUBJECT TO THE INSPECTION OF THE CITY OF MERCED.

3. PRIOR TO ANY WORK BEING PERFORMED, THE CONTRACTOR SHALL CONTACT THE APPROPRIATE REGULATORY AGENCIES FOR A PRE-CONSTRUCTION CONFERENCE. CONTRACTOR SHALL ALSO NOTIFY THE PROJECT CONTACTS LISTED ON THIS SHEET FORTY-EIGHT (48) HOURS IN ADVANCE OF SAID MEETING.

4. IT IS INTENDED THAT THESE PLANS AND SPECIFICATIONS REQUIRE ALL LABOR AND MATERIALS NECESSARY AND PROPER FOR THE WORK CONTEMPLATED AND THAT THE WORK BE COMPLETED IN ACCORDANCE WITH THEIR TRUE INTENT AND PURPOSE. THE CONTRACTOR SHALL NOTIFY NORTHSTAR ENGINEERING GROUP, INC. ("ENGINEER") IMMEDIATELY REGARDING ANY DISCREPANCIES AND AMBIGUITIES WHICH MAY EXIST IN THE PLANS AND SPECIFICATIONS. IF THE PLANS OR SPECIFICATIONS DESCRIBE PORTIONS OF THE WORK IN GENERAL TERMS BUT NOT IN COMPLETE DETAIL, IT IS UNDERSTOOD THAT ONLY THE BEST GENERAL PRACTICE IS TO PREVAIL AND THAT ONLY MATERIALS AND WORKMANSHIP OF THE FIRST QUALITY ARE TO BE USED.

5. IF NORTHSTAR ENGINEERING GROUP, INC. IS TO PERFORM ANY SURVEY STAKING, THEN CONSTRUCTION STAKING FOR GRADING, CURB, GUTTER, SIDEWALK, SANITARY SEWER, STORM DRAIN, AND WATER SHALL BE DONE UNDER THE DIRECTION OF THE ENGINEER. THE CONTRACTOR SHALL NOTIFY THE ENGINEER SEVENTY-TWO (72) HOURS IN ADVANCE OF THIS NEED FOR STAKING. ANY STAKING REQUESTED BY THE CONTRACTOR OR HIS SUBCONTRACTORS THAT IS ABOVE AND BEYOND NORMAL STANDARD STAKING NEEDS AS OUTLINED IN THE CONTRACT, WILL BE SUBJECT TO AN EXTRA BACK CHARGE TO THE CONTRACTOR.

6. THE CONTRACTOR SHALL EXERCISE DUE CAUTION AND SHALL CAREFULLY PRESERVE BENCH MARKS, REFERENCE POINTS AND ALL SURVEY STAKES, AND SHALL BEAR ALL EXPENSE FOR REPLACEMENT AND/OR ERRORS CAUSED BY THEIR UNNECESSARY LOSS OR DISTURBANCE.

7. CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER, ENGINEER AND THE CITY HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER.

8. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY FIELD CHANGES MADE WITHOUT WRITTEN AUTHORIZATION FROM THE CITY ENGINEER.

9. THE CONTRACTOR SHALL PROVIDE ALL LIGHTS, SIGNS, BARRICADES, FLAGMEN, OR OTHER DEVICES NECESSARY FOR PUBLIC SAFETY IN ACCORDANCE WITH THE CURRENT ISSUE OF "MANUAL OF TRAFFIC CONTROLS, WARNING SIGNS, LIGHTS, AND DEVICES FOR USE IN PERFORMANCE OF WORK UPON HIGHWAY" PUBLISHED BY THE STATE OF CALIFORNIA BUSINESS AND TRANSPORTATION AGENCY. CONTRACTOR SHALL COORDINATE WITH THE GOVERNING LOCAL AGENCY TO DETERMINE IF ANY CHANGES TO THE CLASSIFICATION OR OPERATION OF A ROADWAY ARE REQUIRED DUE TO THE IMPROVEMENTS SHOWN ON THESE PLANS (SUCH AS SPEED LIMITS, INTERSECTION TYPE, ETC.) AND SHALL BE RESPONSIBLE FOR PROVIDING ALL NECESSARY INTERIM TRAFFIC MANAGEMENT MEASURES REQUIRED BY THE GOVERNING AGENCY, INCLUDING TRANSITIONAL SIGNAGE AND STRIPING IN PREPARATION OF AND TO BE INSTALLED PRIOR TO COMPLETION AND ACCEPTANCE OF ULTIMATE SIGNAGE AND STRIPING. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH IMPLEMENTING THESE MEASURES.

10. THE OFFICE OF THE CITY OF MERCED PUBLIC WORKS SHALL BE NOTIFIED AT LEAST 48 HOURS IN ADVANCE OF ANY WORK.

11. CABLE TV, ELECTRICAL, GAS, AND TELEPHONE UNDERGROUND WORK SHALL BE COMPLETED PRIOR TO CONSTRUCTION OF THE CURB, GUTTER, SIDEWALK AND PAVING.

12. THE CONTRACTOR SHALL OBTAIN AN ENCROACHMENT PERMIT FROM THE CITY OF MERCED, DEPARTMENT OF PUBLIC WORKS OR ANY OTHER APPLICABLE AGENCY PRIOR TO COMMENCEMENT OF WORK WITHIN EXISTING CITY RIGHT-OF-WAY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PERMITS AND LICENSES REQUIRED FOR THE CONSTRUCTION AND COMPLETION OF THE PROJECT.

13. THE CITY OF MERCED OR ASSOCIATED UTILITY COMPANY AND RESIDENCES TO BE AFFECTED SHALL BE NOTIFIED IMMEDIATELY UPON ANY UTILITY SERVICE DISRUPTION OTHER THAN SPECIFIED ON THESE IMPROVEMENT PLANS AND A TWENTY-FOUR (24) HOUR NOTICE SHALL BE GIVEN FOR ANY PLANNED DISRUPTION.

14. STREET SIGNS, TRAFFIC CONTROL SIGNS, AND PAVEMENT MARKINGS SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR AT LOCATIONS ESTABLISHED BY THE ENGINEER.

15. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXISTING IMPROVEMENTS FROM DAMAGE. COST OF REPLACING DAMAGED EXISTING IMPROVEMENTS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEMS REQUIRING REMOVAL AND REPLACEMENT.

16. CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF THE REMOVAL OR RELOCATION OF ALL EXISTING UTILITIES WITH RESPECTIVE UTILITY COMPANIES.

17. ASPHALT CONCRETE SHALL BE PLACED ONLY WHEN THE ATMOSPHERIC TEMPERATURE IS ABOVE 50°F AND RISING.

18. DRAWING NUMBERS SHOWN ON THE PLANS REFER TO DRAWINGS CONTAINED IN THE CITY OF MERCED STANDARD SPECIFICATIONS (I.E. DWG. 30).

19. ALL TRENCHES IN PAVED AREAS SHALL BE PAVED WITH TEMPORARY PAVING, OR COVERED WITH A STEEL PLATE OF APPROPRIATE SIZE AND STRENGTH, THE SAME DAY THE PAVEMENT CUT IS MADE.

20. WHENEVER PAVEMENT IS BROKEN OR CUT IN THE INSTALLATION OF THE WORK COVERED BY THESE SPECIFICATIONS AND PLANS, THE PAVEMENT SHALL BE REPLACED, AFTER PROPER BACK FILLING, WITH PAVEMENT MATERIALS EQUAL TO OR BETTER THAN THE MATERIALS USED IN THE ORIGINAL PAVING. THE FINISHED PAVEMENT SHALL BE SUBJECT TO THE APPROVAL OF THE CITY ENGINEER.

21. PRIOR TO COMMENCING ANY WORK, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO HAVE EACH UTILITY COMPANY LOCATED, IN THE FIELD, THEIR MAIN AND SERVICE LINES. THE CONTRACTOR SHALL NOTIFY MEMBERS OF THE UNDERGROUND SERVICE ALERT (U.S.A.) FORTY-EIGHT (48) HOURS IN ADVANCE OF PERFORMING ANY EXCAVATION WORK BY CALLING THE TOLL-FREE NUMBER (800) 227-2600. THE CONTRACTOR SHALL RECORD THE U.S.A. ORDER NUMBER. IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO PROTECT ALL EXISTING UTILITIES SO THAT NO DAMAGE RESULTS TO THEM DURING THE PERFORMANCE OF THIS CONTRACT. ANY REPAIRS NECESSARY TO DAMAGED UTILITIES SHALL BE PAID FOR BY THE CONTRACTOR. THE CONTRACTOR SHALL BE REQUIRED TO COOPERATE WITH OTHER CONTRACTORS AND UTILITY COMPANIES INSTALLING NEW STRUCTURES, UTILITIES AND SERVICE TO THE DEVELOPMENT.

22. PAYMENT FOR PAVEMENT WILL BE MADE ONLY FOR AREAS SHOWN ON THE PLANS. REPLACEMENT OF PAVEMENT WHICH IS BROKEN OR CUT DURING THE INSTALLATION OF THE WORK COVERED BY THESE SPECIFICATIONS AND PLANS, AND WHICH LIES OUTSIDE OF SAID AREAS, SHALL BE INDICATED IN THE CONTRACTOR'S UNIT PRICE FOR PAVEMENT, AND NO ADDITIONAL PAYMENT SHALL BE MADE FOR SUCH WORK.

23. EXCAVATIONS OF 5 FEET OR MORE IN DEPTH WILL REQUIRE AN EXCAVATION PERMIT FROM THE STATE OF CALIFORNIA DEPARTMENT OF INDUSTRIAL SAFETY. FOR TRENCHES 5 FEET OR MORE IN DEPTH, THE CONTRACTOR SHALL COMPLY WITH SECTION 5-1.02A OF THE CALTRANS STANDARDS, CHAPTER 9 OF THE STATE OF CALIFORNIA LABOR CODE, AND ANY LOCAL CODES OR ORDINANCES.

24. WE CALL YOUR ATTENTION TO TITLE 8 CALIFORNIA ADMINISTRATION CODE SECTION 1540 (A) (1) OF THE CONSTRUCTION SAFETY ORDERS ISSUED BY THE OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD PURSUANT TO THE CALIFORNIA OCCUPATIONS SAFETY AND HEALTH ACT OF 1973 AS AMENDED WHICH STATES: (1) PRIOR TO OPENING AN EXCAVATION EFFORT SHALL BE MADE TO DETERMINE WHETHER UNDERGROUND INSTALLATIONS; I.E. SEWER, WATER, FUEL, ELECTRICAL LINES, ETC., WILL BE ENCOUNTERED AND IF SO, WHERE SUCH UNDERGROUND INSTALLATIONS ARE LOCATED. WHEN THE EXCAVATION APPROACHES THE APPROXIMATE LOCATION OF SUCH INSTALLATION, THE EXACT LOCATION SHALL BE DETERMINED BY CAREFUL PROBING OR HAND DIGGING; AND, WHEN IT IS UNCOVERED, ADEQUATE PROTECTION SHALL BE PROVIDED FOR THE EXISTING INSTALLATION. ALL KNOWN OWNERS OF UNDERGROUND FACILITIES IN THE AREA CONCERNED SHALL BE ADVISED OF PROPOSED WORK AT LEAST FORTY-EIGHT (48) HOURS PRIOR TO THE START OF ACTUAL EXCAVATION.

25. THE CONTRACTOR SHALL MAINTAIN A NEATLY MARKED SET OF FULL-SIZE AS-BUILT RECORD DRAWINGS SHOWING THE FINAL LOCATION AND LAYOUT OF ALL MECHANICAL, ELECTRICAL AND INSTRUMENTATION EQUIPMENT, PIPING AND CONDUITS, STRUCTURES AND OTHER FACILITIES. AS-BUILT RECORD DRAWINGS SHALL REFLECT CHANGE ORDERS, ACCOMMODATIONS, AND ADJUSTMENTS TO ALL IMPROVEMENTS CONSTRUCTED. WHERE NECESSARY, SUPPLEMENTAL DRAWINGS SHALL BE PREPARED AND SUBMITTED BY THE CONTRACTOR TO THE DEVELOPER AND APPROVAL AGENCY.

26. SIGNING, STRIPING AND PAVEMENT MARKINGS SHALL BE IN STRICT CONFORMANCE WITH THE CITY OF MERCED STANDARDS AND SPECIFICATIONS.

GENERAL NOTES (CONT)

27. PRIOR TO ACCEPTANCE OF THE PROJECT, THE CONTRACTOR SHALL DELIVER TO THE ENGINEER, ONE SET OF NEATLY MARKED AS-BUILT RECORD DRAWINGS SHOWING THE INFORMATION REQUIRED ABOVE. AS-BUILT RECORD DRAWINGS SHALL BE REVIEWED AND THE COMPLETE AS-BUILT RECORD DRAWING SET SHALL BE CURRENT WITH ALL CHANGES AND DEVIATIONS REDLINED AS A PRECONDITION TO THE FINAL PROGRESS PAYMENT APPROVAL AND/OR FINAL ACCEPTANCE.

28. AFTER CONSTRUCTION OF ALL IMPROVEMENTS, THE CONTRACTOR SHALL SUBMIT ONE SET OF REPRODUCIBLE PLANS. FINAL INVERT ELEVATIONS FOR SEWER AND STORM DRAIN LINES THAT ARE TO BE EXTENDED FOR FUTURE CONSTRUCTION SHALL ALSO BE SHOWN ON THE "AS-BUILT" PLANS ALL AS PROVIDED BY THE CONTRACTOR.

29. THE CONTRACTOR SHALL NOTIFY NORTHSTAR ENGINEERING AT LEAST 48 HOURS PRIOR TO BACK FILLING OF ANY PIPE WHICH STUBS TO A FUTURE PHASE OF CONSTRUCTION FOR INVERT VERIFICATION. TOLERANCE SHALL BE IN ACCORDANCE WITH THE CITY OF MERCED STANDARD SPECIFICATIONS.

30. WHENEVER EXISTING FACILITIES ARE REMOVED, DAMAGED, BROKEN, OR CUT IN THE INSTALLATION OF THE WORK COVERED BY THESE PLANS OR SPECIFICATIONS, SAID FACILITIES SHALL BE REPLACED AT THE CONTRACTORS EXPENSE, AFTER PROPER BACKFILLING AND/OR CONSTRUCTION, WITH MATERIALS EQUAL TO OR BETTER THAN THE MATERIALS USED IN THE ORIGINAL EXISTING FACILITIES. THE FINISHED PRODUCT SHALL BE SUBJECT TO THE APPROVAL OF THE OWNER, THE ENGINEER, AND THE RESPECTIVE REGULATORY AGENCY.

31. DUST CONTROL SHALL BE PROVIDED AT ALL TIMES, AT THE CONTRACTOR'S EXPENSE TO MINIMIZE ANY DUST NUISANCE AND SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CITY OF MERCED. CONTRACTOR SHALL OBTAIN A PERMIT FROM CAL WATER FOR USE OF WATER FROM FIRE HYDRANTS FOR CONSTRUCTION PURPOSES. THE PERMIT SHALL BE APPROVED BY THE CITY OF MERCED FIRE DEPARTMENT.

32. CONTRACTOR SHALL PROVIDE CITY WITH A CERTIFICATE SIGNED BY A REGISTERED CIVIL ENGINEER OR LAND SURVEYOR STATING THAT ALL BUILDING PAD ELEVATIONS ARE IN ACCORDANCE WITH THE APPROVED GRADING PLAN.

33. UNLESS OTHERWISE STATED, ALL STATIONS INDICATED ON THE IMPROVEMENT PLANS ARE REFERENCED TO THE CENTERLINE OF THE STREET. ALL STATIONS OFF CENTER ARE PERPENDICULAR TO OR RADIALLY OPPOSITE CENTERLINE STATIONS, UNLESS OTHERWISE NOTED.

34. DRIVEWAYS ON STREETS TO BE LOCATED IN THE FIELD BY THE ENGINEER AT THE TIME OF CONSTRUCTION. DRIVEWAYS SHALL NOT COINCIDE WITH WHEELCHAIR RAMPS.

35. IF THE PROJECT IS SUBJECT TO THE INDIRECT SOURCE REVIEW (ISR) REQUIREMENT, THE CONTRACTOR IS REQUIRED TO KEEP DAILY RECORDS OF THE TOTAL HOURS OF OPERATION FOR EACH PIECE OF EQUIPMENT GREATER THAN 50-HORSEPOWER BEING USED ON THE PROJECT SITE DURING CONSTRUCTION. WITHIN 30 DAYS OF COMPLETING CONSTRUCTION OF EACH PROJECT PHASE, A REPORT SUMMARIZING TOTAL HOURS OF OPERATION BY EQUIPMENT TYPE, MODEL, YEAR, AND HORSEPOWER FOR EACH PIECE OF CONSTRUCTION EQUIPMENT GREATER THAN 50-HORSEPOWER MUST BE SUBMITTED TO THE AIR DISTRICT. TO ASSIST IN THIS RECORDKEEPING, THE "DETAILED FLEET TEMPLATE" IS AVAILABLE ON THE DISTRICT'S WEBSITE AT HTTP://WWW.VALLEYAIR.ORG/ISR/ISRFORMSANDAPPLICATIONS.HTM. FOR EACH PROJECT PHASE, THE DISTRICT WILL VERIFY THAT THE FLEET DETAILS ACHIEVED THE REQUIRED EMISSION REDUCTIONS. IF THE CONTRACTOR IS NOT GOING TO MEET THE STANDARDS AND/OR RECORD KEEPING REQUIRED BY THE AIR DISTRICT, THE CONTRACTOR SHALL NOTIFY THE AIR BOARD PRIOR TO CONSTRUCTION SO THE NECESSARY MITIGATION FEE SHALL BE PAID. IF THE AIR BOARD IS NOT NOTIFIED PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL BE REQUIRED TO PAY THE PENALTY TO THE AIR BOARD.

36. PRIOR TO FINALIZING IMPROVEMENTS AND OPENING ROADS THE CONTRACTOR SHALL COORDINATE WITH THE GOVERNING LOCAL AGENCY FOR POTENTIAL TRAFFIC SIGNAGE AND STRIPING MODIFICATIONS (FOR EXAMPLE, SPEED LIMIT CHANGES OR REDUCTIONS) BEYOND THE PROJECT LIMITS THAT ARE NECESSITATED BY THE CONSTRUCTION OF THE IMPROVEMENTS SHOWN ON THESE PLANS. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH SIGNAGE AND STRIPING MODIFICATIONS REQUIRED BY THE GOVERNING AGENCY.

37. ANY ASSUMPTION MADE BY THE CONTRACTOR IS NOT THE RESPONSIBILITY OF THE ENGINEER OR DESIGN CONSULTANT. CONTRACTOR SHALL SUBMIT A PRE-BID REQUEST FOR INFORMATION (RFI) FOR ANY CLARIFICATION NEEDED AND SHALL BE RESPONSIBLE FOR COMPLETING THE PROJECT AT THE CONTRACTOR'S EXPENSE FOR ANY WRONG ASSUMPTIONS MADE.

GRADING NOTES

1. EARTHWORK SHALL BE PERFORMED IN ACCORDANCE WITH THE CITY OF MERCED STANDARDS AND THE PROJECT SOILS REPORT. ALL FILL AREAS SHALL BE TESTED AS REQUIRED BY CITY OF MERCED AND SHALL BE PAID FOR BY THE CONTRACTOR.

2. THE DEVELOPER SHALL BE RESPONSIBLE FOR COST OF INITIAL TEST FOR MOISTURE DENSITY CURVE. IF THE FIRST TEST FAILS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR COST OF ALL SUBSEQUENT CURVES AND TESTS.

3. THE CONTRACTOR SHALL REVIEW SITE PRIOR TO BIDDING. ALL VEGETATION AND DELETERIOUS MATERIALS SHALL BE REMOVED FROM THE SITE AT THE EXPENSE OF THE CONTRACTOR AND SHALL BE INCLUDED IN THE LUMP SUM CLEARING COST.

4. THE CONTRACTOR SHALL PRESERVE ALL STAKES AND POINTS SET FOR LINES, GRADES OR MEASUREMENT OF THE WORK IN THEIR PROPER PLACES UNTIL AUTHORIZED TO REMOVE THEM BY THE ENGINEER. ALL EXPENSES INCURRED IN REPLACING STAKES THAT HAVE BEEN REMOVED WITHOUT PROPER AUTHORITY SHALL BE PAID FOR BY THE CONTRACTOR.

5. CONTRACTOR'S PRICE SHALL INCLUDE COST TO ACHIEVE A BALANCED SITE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO IMPORT AND EXPORT MATERIAL AS REQUIRED TO BALANCE SITE.

6. CONTRACTOR SHALL GRADE ALL LANDSCAPE AREAS TO WITHIN 0.10 FEET OF FINAL GRADE ELEVATIONS WITH APPROPRIATE LANDSCAPE SECTIONS INCLUDED.

7. ALL A.C. PAVING SHALL BE FOG SEALED PER SECTION 37 OF CALTRANS STANDARD SPECIFICATIONS, THE LATEST EDITION.

8. GRADE TAGS LOCATED ON CURBS REFERENCE TOP OF CURB ELEVATION UNLESS OTHERWISE NOTED. ADDITIONAL DESCRIPTIONS ARE PROVIDED TO DENOTE HORIZONTAL AND VERTICAL CHANGES IN ACCORDANCE WITH ABBREVIATIONS DEFINED ON COVER SHEET.

9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING HIS OWN EARTHWORK QUANTITIES FOR BIDDING, CONTRACT AND CONSTRUCTION PURPOSE. IF IT APPEARS THERE WILL BE AN EXCESS OR SHORTAGE OF MATERIAL, THE CONTRACTOR SHALL NOTIFY THE ENGINEER TO DETERMINE IF POSSIBLE GRADE ADJUSTMENTS CAN BE MADE.

10. SITE CONTRACTOR SHALL COORDINATE WITH BUILDING CONTRACTOR TO ACCOMMODATE THE PROPER CLEARANCE BETWEEN THE BOTTOM OF THE STUCCO AND THE TOP OF THE GRADE TREATMENT ALONG THE BUILDING AS APPLICABLE, IN ACCORDANCE WITH SECTION 2512.1.2. OF THE MOST CURRENT CALIFORNIA BUILDING CODE, IF THE SUBJECT BUILDING SIDING TREATMENT IS STUCCO. CONTRACTOR SHALL NOTIFY ENGINEER IF ANY GRADES ARE ADJUSTED. CONTRACTOR SHALL ALSO APPLY FLASHING WHERE APPLICABLE WITHIN AREAS OF GRADE TRANSITION.

11. ALL LANDSCAPE AREAS THAT ABUT ANY PORTION OF THE BUILDING SHALL BE GRADED SUCH THAT THE FINISHED GRADE IN LANDSCAPE AREAS SHALL BE A MINIMUM OF EIGHT INCHES (8") BELOW FINISHED FLOOR OF THE ABUTTING BUILDING AND IN NO CASE SHALL THE LANDSCAPE AREA BE GRADED OR LANDSCAPED SUCH THAT WATER DRAINS TOWARD THE BUILDING.

12. SINCE THE ENGINEER CANNOT CONTROL THE EXACT METHOD OR MEANS USED BY THE CONTRACTOR DURING GRADING OPERATIONS, NOR CAN THE ENGINEER GUARANTEE THE EXACT SOIL CONDITION OVER THE ENTIRE SITE, THE ENGINEER ASSUMES NO RESPONSIBILITY FOR FINAL EARTHWORK QUANTITIES.

13. CONTRACTOR IS RESPONSIBLE FOR THE OFF HAUL AND DISPOSAL OF ANY AND ALL EXCESS DIRT FROM CONSTRUCTION SITE.

14. CONTRACTOR SHALL COORDINATE WITH THE EXISTING ADJOINING PROPERTY OWNERS PRIOR TO ANY WORK BEING STARTED THAT MAY AFFECT THEIR PROPERTY.

15. CONTRACTOR SHALL PROVIDE A SMOOTH TRANSITION FROM THE PROPOSED GRADING TO THE EXISTING FLOWLINE, CURB, CONCRETE, AND OR PAVEMENT ELEVATIONS.

16. ALL EXISTING WELLS AND SEPTIC TANKS SHALL BE REMOVED AND/OR ABANDONED PER THE REQUIREMENTS OF THE COUNTY HEALTH DEPARTMENT AND THE CITY OF MERCED. THIS WORK SHALL BE INCLUDED IN THE LUMP SUM CLEARING COST.

17. CONTRACTOR SHALL VERIFY BUILDING SUBGRADE SECTIONS WITH ARCHITECT PLANS BEFORE CONSTRUCTION. IF A DISCREPANCY EXISTS, CONTRACTOR TO NOTIFY THE ENGINEER IMMEDIATELY.

18. PRIOR TO CONSTRUCTING ANY FLATWORK THE CONTRACTOR SHALL VERIFY THE FINISH FLOOR ELEVATIONS AT ALL DOORS. NOTE THAT FINISH FLOOR ELEVATIONS MAY HAVE BEEN CHANGED DUE TO FOUNDATION ADJUSTMENTS IN FIELD. CONTRACTOR SHALL HOLD ADJUSTED FINISH FLOOR GRADES, ACCOUNT FOR DOOR THRESHOLDS, AND ADJUST GRADES AS NECESSARY TO STAY IN COMPLIANCE WITH CURRENT ADA STANDARDS. CONTRACTOR SHALL NOTIFY NORTHSTAR ENGINEERING IMMEDIATELY IF ANY GRADE ADJUSTMENTS WILL CREATE ADA ACCESSIBILITY ISSUES.

GRADING NOTES (CONT)

19. THE VALUES SHOWN ON THE GRADING PLAN ARE FOR REFERENCE AND FEE PURPOSES ONLY. SINCE THE ENGINEER CANNOT CONTROL THE EXACT METHOD OR MEANS USED BY THE CONTRACTOR DURING GRADING OPERATIONS, NOR CAN THE ENGINEER GUARANTEE THE EXACT SOIL CONDITION OVER THE ENTIRE SITE, THE ENGINEER ASSUMES NO RESPONSIBILITY FOR FINAL EARTHWORK QUANTITIES.

20. THE VALUES SHOWN ON THE GRADING PLAN ARE TO AID THE CONTRACTOR IN DETERMINING THE QUANTITIES OF DIRT TO BE MOVED. THE CUT AND FILL QUANTITIES SHOWN INDICATE A THEORETICAL YARDAGE FIGURE AND ARE GIVEN ONLY AS A CONVENIENCE TO THE CONTRACTOR. THE QUANTITIES SHOWN SHALL NOT BE USED AS THE BASIS OF BID COSTS.

21. EARTHWORK QUANTITY VALUES SHOWN ON PAVING PLAN REPRESENT THE DIFFERENCE BETWEEN THE ESTIMATED EXISTING GRADES FROM ASBUILT DOCUMENTS COMPARED WITH THE SUBGRADE STRUCTURAL SECTIONS OF THE PROPOSED GRADING DESIGN. SEE STRUCTURAL SECTIONS IN HATCH LEGEND ON PAVING PLAN.

22. EARTHWORK QUANTITY CALCULATIONS DO NOT INCLUDE STRIPPING, SHRINKAGE, SWELL FACTORS OR MATERIAL FROM UTILITY TRENCH SPOILS.

NPDES NOTES

1. STORM DRAIN NPDES PERMIT TO COMPLY WITH THE STATE OF CALIFORNIA'S STATEWIDE GENERAL NPDES PERMIT, REGULATING DISCHARGES OF STORM WATER ASSOCIATED WITH CONSTRUCTION ACTIVITY FROM SOIL DISTURBANCES OF ONE (1) ACRE OR MORE, A NOTICE OF INTENT (NOI) TO COMPLY WITH THE TERMS OF THE GENERAL PERMIT TO DISCHARGE STORM WATER ASSOCIATED WITH CONSTRUCTION ACTIVITY MUST BE FILED AND THE APPROPRIATE FEE PAID PRIOR TO COMMENCEMENT OF CONSTRUCTION. IN ADDITION, AT THE CONCLUSION OF THE PROJECT A NOTICE OF TERMINATION (NOT) MUST ALSO BE FILED. SUBMIT THE FEE, NOI, AND NOT TO THE STATE WATER RESOURCES CONTROL BOARD UTILIZING THE STORM WATER MULTIPLE APPLICATION AND REPORT TRACKING SYSTEM (SMARTS) AT THE FOLLOWING ADDRESS:

   WWW.SMARTS.WATERBOARDS.CA.GOV

   FEES AND PAYMENTS CAN BE MADE TO THE FOLLOWING ADDRESS:

   STATE WATER RESOURCES CONTROL BOARD
   DIVISION OF WATER QUALITY
   ATTN: STORM WATER PERMIT UNIT
   P.O. BOX 1977
   SACRAMENTO, CA 95812-1977

   IF YOU HAVE ANY QUESTIONS CALL JOSEPH HENAO, WATER QUALITY CONTROL ENGINEER, CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD, AT (916) 255-3028.

THE FOLLOWING MUST BE SUBMITTED TO THE CITY PRIOR TO BEGINNING WORK AND PRIOR TO THE ISSUANCE OF AN ENCROACHMENT PERMIT:

A) TRANSMITTAL MEMO THAT INCLUDES:
   * THE NAME AND PHONE NUMBER OF THE PERSON RESPONSIBLE FOR SWPPP IMPLEMENTATION, AND
   * IF APPLICABLE, A LISTING OF THE POST-CONSTRUCTION BEST MANAGEMENT PRACTICES THAT WILL BE INSTALLED TO SATISFY THE REQUIREMENTS OF THE CITY OF MERCED MUNICIPAL CODE CHAPTER TITLES 13 AND 15.
   * COPY OF SWPPP MUST REMAIN ON SITE DURING CONSTRUCTION AT ALL TIMES.

B) COPY OF A SIGNED NOTICE OF INTENT FORM OR A WASTE DISCHARGE IDENTIFICATION NUMBER.
   WDID#: CONTRACTOR TO PROVIDE PRIOR TO CONSTRUCTION; IF REQUIRED

2. FOR SITES THAT HAVE SOIL DISTURBANCES OF 1 ACRE OR MORE AND ARE REQUIRED TO OBTAIN COVERAGE UNDER THE STATE'S CONSTRUCTION GENERAL PERMIT (CGP):
   THE CONTRACTOR SHALL COORDINATE WITH THE OWNER AND ENSURE THAT A QUALIFIED SWPPP PRACTITIONER (QSP) IS CONTRACTED TO PROVIDE QSP SERVICES THROUGHOUT THE COURSE OF CONSTRUCTION (FROM THE START OF CONSTRUCTION TO THE DATE AT WHICH THE NOTICE OF TERMINATION - NOT - IS FILED). THE QSP SHALL BE RESPONSIBLE FOR ALL APPLICABLE INSPECTIONS, TRAINING, SAMPLING, TESTING, REPORTING, CHANGES OF INFORMATION (COI), SWPPP REVISIONS, NOTICE OF TERMINATION (NOT), AND OTHER QSP-RELATED RESPONSIBILITIES AS IDENTIFIED IN THE STATE'S CGP.

DEWATERING NOTES

1. THE CONTRACTOR SHALL FURNISH, INSTALL, OPERATE AND MAINTAIN ALL MACHINERY APPLIANCES, AND EQUIPMENT TO MAINTAIN ALL EXCAVATIONS FREE FROM WATER DURING CONSTRUCTION. THE CONTRACTOR SHALL DISPOSE OF THE WATER SO AS NOT TO CAUSE DAMAGE TO PUBLIC OR PRIVATE PROPERTY, OR TO CAUSE A NUISANCE OR MENACE TO THE PUBLIC OR VIOLATE THE LAW. THE DEWATERING SYSTEM SHALL BE INSTALLED AND OPERATED SO THAT THE GROUNDWATER LEVEL OUTSIDE THE EXCAVATION IS NOT REDUCED TO THE EXTENT WHICH WOULD CAUSE DAMAGE OR ENDANGERED ADJACENT STRUCTURES OR PROPERTY. ALL COST FOR DEWATERING SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ALL PIPE CONSTRUCTION. THE STATIC WATER LEVEL SHALL BE DRAWN DOWN A MINIMUM OF 1 FOOT BELOW THE BOTTOM OF EXCAVATIONS TO MAINTAIN THE UNDISTURBED STATE OF NATURAL SOILS AND ALLOW THE PLACEMENT OF ANY FILL TO THE SPECIFIED DENSITY. THE CONTRACTOR SHALL HAVE ON HAND, PUMPING EQUIPMENT AND MACHINERY IN GOOD WORKING CONDITION FOR EMERGENCIES AND SHALL HAVE WORKMEN AVAILABLE FOR IT'S OPERATION. DEWATERING SYSTEMS SHALL OPERATE CONTINUOUSLY UNTIL BACK FILL HAS BEEN COMPLETED TO 1 FOOT ABOVE THE NORMAL STATIC GROUNDWATER LEVEL.

2. THE CONTRACTOR SHALL CONTROL SURFACE WATER TO PREVENT ENTRY INTO EXCAVATIONS. AT EACH EXCAVATION, A SUFFICIENT NUMBER OF TEMPORARY OBSERVATION WELLS TO CONTINUOUSLY CHECK THE GROUNDWATER LEVEL SHALL BE PROVIDED.

3. THE CONTROL OF GROUNDWATER SHALL BE SUCH THAT SOFTENING OF THE BOTTOM OF EXCAVATIONS, OR FORMATION OF "QUICK" CONDITIONS OR "BOILS", DOES NOT OCCUR. DEWATERING SYSTEMS SHALL BE DESIGNED AND OPERATED SO AS TO PREVENT REMOVAL OF THE NATURAL SOILS. THE RELEASE OF GROUNDWATER AT ITS STATIC LEVEL SHALL BE PERFORMED IN SUCH A MANNER AS TO MAINTAIN THE UNDISTURBED STATE OF THE NATURAL FOUNDATIONS SOILS, PREVENT DISTURBANCE OF COMPACTED BACK FILL, AND PREVENT FLOTATION OR MOVEMENT OF STRUCTURES, PIPELINES AND SEWERS. IF AN NPDES (NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM) PERMIT IS REQUIRED FOR DISPOSAL OF WATER FROM CONSTRUCTION DEWATERING ACTIVITIES, IT SHALL BE OBTAINED BY THE CONTRACTOR PRIOR TO ANY DEWATERING ACTIVITIES.

4. ONE HUNDRED PERCENT STANDBY PUMPING CAPACITY SHALL BE AVAILABLE ON SITE AT ALL TIMES AND SHALL BE CONNECTED TO THE DEWATERING SYSTEM PIPING TO PERMIT IMMEDIATE USE. IN ADDITION, STANDBY AUXILIARY EQUIPMENT AND APPLIANCES FOR ALL ORDINARY EMERGENCIES, AND COMPETENT WORKMEN FOR OPERATION AND MAINTENANCE OF ALL DEWATERING EQUIPMENT SHALL BE ON SITE AT ALL TIMES. STANDBY EQUIPMENT SHALL INCLUDE EMERGENCY POWER GENERATION AND AUTOMATIC SWITCH OVER TO THE EMERGENCY GENERATOR WHEN NORMAL POWER FAILS. DEWATERING SYSTEMS SHALL NOT BE SHUT DOWN BETWEEN SHIFTS, ON HOLIDAYS, ON WEEKENDS, OR DURING WORK STOPPAGES.

5. SUMPS SHALL BE NO DEEPER THAN 5 FEET AND SHALL BE AT THE LOW POINT OF EXCAVATION. EXCAVATION SHALL BE GRADED TO DRAIN TO THE SUMPS.

STORM DRAIN NOTES

1. ALL STORM DRAIN CONSTRUCTION, MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE LATEST EDITION OF THE CALIFORNIA PLUMBING CODE.

2. THE CONTRACTOR SHALL PROVIDE ALL LIGHTS, SIGNS, BARRICADES, FLAGMEN OR OTHER DEVICES NECESSARY FOR PUBLIC SAFETY.

3. THE CONTRACTOR SHALL PROVIDE ALL SHORING, BRACING, SLOPING OR OTHER PROVISIONS NECESSARY TO PROTECT WORKMEN FOR ALL AREAS TO BE EXCAVATED TO A DEPTH OF 5 FEET OR MORE. SAID PROTECTION TO BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CITY OF MERCED DEPARTMENT OF PUBLIC WORKS, AND STATE REGULATIONS.

4. ALL MAINTENANCE HOLE RIMS TO BE ADJUSTED TO PROPOSED FINISH GRADE AFTER STREET PAVING, UNLESS OTHERWISE NOTED. COST FOR RAISING FACILITIES TO BE INCLUDED IN UNIT PRICES FOR MAINTENANCE HOLES.

5. ALL STORM DRAIN LINES SHALL BE CLEANED OF ALL SAND AND DEBRIS PRIOR TO ACCEPTANCE BY THE CITY OF MERCED.

6. THE CONTRACTOR SHALL EXPOSE ALL EXISTING STORM DRAIN PIPES, WHERE A CONNECTION IS TO BE MADE, AND NOTIFY THE ENGINEER IF THERE IS A DISCREPANCY BETWEEN THE SIGNED PLANS AND THE EXISTING FIELD CONDITION PRIOR TO THE START OF CONSTRUCTION.

7. STORM DRAIN CONTRACTOR SHALL VERIFY LOCATION OF ALL EXISTING UNDERGROUND UTILITIES AND WILL BE RESPONSIBLE FOR PROTECTION OF THE SAME.

8. CONTRACTOR TO BE RESPONSIBLE FOR ALL TESTING OF STORM DRAIN FACILITIES IN ACCORDANCE WITH THE CITY OF MERCED STANDARD SPECIFICATIONS AND PLANS.

9. STORM DRAINAGE SYSTEM WILL BE PUBLICLY OWNED AND MAINTAINED.

STORM DRAIN NOTES (CONT)

10. ALL STORM DRAIN PIPE MATERIALS SHALL BE IN ACCORDANCE WITH TABLE 701.2 OF THE 2022 CALIFORNIA PLUMBING CODE. CONTRACTOR SHALL HAVE PIPE MANUFACTURER PERFORM CALCULATIONS TO DETERMINE PIPE CLASS PRIOR TO CONSTRUCTION DUE TO EXCESSIVE DEPTH.

11. ALL STORM DRAIN MAINTENANCE HOLES AND BASES SHALL BE PRECAST AND CONSTRUCTED IN ACCORDANCE WITH CITY OF MERCED STANDARDS, CONTRACTOR SHALL SET MAINTENANCE HOLE CASTING AND COVERS TO FINISH GRADE AFTER STREET IMPROVEMENTS ARE COMPLETE, AND SHALL BE RESPONSIBLE FOR LOCATION OF MAINTENANCE HOLES BENEATH THE FINISH PAVEMENT.

TOPOGRAPHY NOTES

1. PLAN SET DESIGN BASED OFF OF TOPOGRAPHIC SURVEY PERFORMED ON AUGUST 13, 2023. CONTRACTOR SHALL BE AWARE THAT SINCE THIS INITIAL SURVEY THE SITE MAY HAVE CHANGED.

2. ALL EXISTING UTILITIES WERE PLOTTED FROM RECORD INFORMATION AND FIELD TOPOGRAPHY. ACTUAL LOCATIONS MAY VARY AND ADDITIONAL CROSSINGS MAY EXIST IN THE FIELD.

3. THE CONTRACTOR SHALL USE EXTREME CAUTION WHEN EXPOSING EXISTING UTILITY CROSSINGS AND SERVICES.

4. ANY DAMAGE TO EXISTING UTILITIES WILL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

5. PRIOR TO BEGINNING CONSTRUCTION THE CONTRACTOR SHALL CALL U.S.A. (800) 227-2600 TO HAVE THE SITE MARKED. THE CONTRACTOR SHALL POTHOLE ALL EXISTING UTILITIES TO VERIFY THAT NO CONFLICTS EXIST BETWEEN PROPOSED AND EXISTING IMPROVEMENTS.

6. CONTRACTOR/DEVELOPER SHALL OBTAIN AN ENCROACHMENT PERMIT FROM THE APPROPRIATE AGENCY TO DO ANY WORK WITHIN RIGHT-OF-WAY PRIOR TO CONSTRUCTION.

7. CONTRACTOR TO BE CAUTIOUS OF UNDERGROUND STUBS AND LINES. CONTRACTOR SHALL USE EXTREME CAUTION AS TO OTHER LINES MAY EXIST ON THE SITE THAT ARE NOT CLEARLY MARKED.

8. AN ATTEMPT HAS BEEN MADE TO SHOW ALL EXISTING STRUCTURES, UTILITIES, DRIVES, PAVEMENTS, CURBS, WALKS, ETC. IN THEIR APPROXIMATE LOCATION ON THE SURVEY AND/OR WORKING DRAWINGS. HOWEVER, OTHERS THAT ARE NOT SHOWN MAY EXIST AND MAY BE FOUND UPON VISITING THE SITE OR DURING THE CLEARING AND REMOVAL WORK. IT WILL BE THE RESPONSIBILITY OF THIS CONTRACTOR TO ACCURATELY LOCATE ALL EXISTING FACILITIES AND TO DETERMINE THEIR EXTENT. IF SUCH FACILITIES OBSTRUCT THE PROGRESS OF THE WORK AND ARE NOT INDICATED TO BE REMOVED OR RELOCATED, THEY SHALL BE REMOVED OR RELOCATED ONLY AS DIRECTED BY THE OWNER.

9. THE CONTRACTOR SHALL REPORT ANY EXISTING SITE ELEMENT NOT SHOWN ON THE WORKING DRAWINGS TO THE ARCHITECT OF RECORD SO THAT THE PROPER DISPENSATION OF THAT ELEMENT MAY BE MADE.

10. IN CONJUNCTION WITH CONTACTING USA TO LOCATE UNDERGROUND UTILITIES WITHIN THE PUBLIC RIGHT-OF-WAY IT IS HIGHLY RECOMMENDED THAT THE CONTRACTOR UTILIZE (GPR) GROUND PENETRATING RADAR UNDERGROUND SERVICES TO IDENTIFY ONSITE UTILITIES THAT MAY NOT BE VISIBLE FROM THE SURFACE.

11. CONTRACTOR SHALL REVIEW ALL OF THE CONSULTANT'S PLAN SETS FOR ADDITIONAL DEMOLITION, REPLACEMENT AND IMPROVEMENTS PRIOR TO BEGINNING OF ANY WORK. IF A CONFLICT IS FOUND THEN THE CONTRACTOR SHALL NOTIFY THE ARCHITECT AND ENGINEER IMMEDIATELY.

12. IN ACCORDANCE WITH SECTION 8771 OF THE PROFESSIONAL LAND SURVEYORS ACT
   A) MONUMENTS SET SHALL BE SUFFICIENT IN NUMBER AND DURABILITY AND EFFICIENTLY PLACED SO AS NOT TO BE READILY DISTURBED, TO ASSURE, TOGETHER WITH MONUMENTS ALREADY EXISTING, THE PERPETUATION OR FACILE REESTABLISHMENT OF ANY POINT OR LINE OF THE SURVEY.

   B) WHEN MONUMENTS EXIST THAT CONTROL THE LOCATION OF SUBDIVISIONS, TRACTS, BOUNDARIES, ROADS, STREETS, OR HIGHWAYS, OR PROVIDE HORIZONTAL OR VERTICAL SURVEY CONTROL, THE MONUMENTS SHALL BE LOCATED AND REFERENCED BY OR UNDER THE DIRECTION OF A LICENSED LAND SURVEYOR OR REGISTERED CIVIL ENGINEER PRIOR TO THE TIME WHEN ANY STREETS, HIGHWAYS, OTHER RIGHTS-OF-WAY, OR EASEMENTS ARE IMPROVED, CONSTRUCTED, RECONSTRUCTED, MAINTAINED, RESURFACED, OR RELOCATED, AND A CORNER RECORD OR RECORD OF SURVEY OF THE REFERENCES SHALL BE FILED WITH THE COUNTY SURVEYOR. THEY SHALL BE RESET IN THE SURFACE OF THE NEW CONSTRUCTION, A SUITABLE MONUMENT BOX PLACED THEREON, OR PERMANENT WITNESS MONUMENTS SET TO PERPETUATE THEIR LOCATION IF ANY MONUMENT COULD BE DESTROYED, DAMAGED, COVERED, OR OTHERWISE OBLITERATED, AND A CORNER RECORD OR RECORD OF SURVEY FILED WITH THE COUNTY SURVEYOR PRIOR TO THE RECORDING OF A CERTIFICATE OF COMPLETION FOR THE PROJECT. SUFFICIENT CONTROLLING MONUMENTS SHALL BE RETAINED OR REPLACED IN THEIR ORIGINAL POSITIONS TO ENABLE PROPERTY, RIGHT-OF-WAY AND EASEMENT LINES, PROPERTY CORNERS, AND SUBDIVISION AND TRACT BOUNDARIES TO BE REESTABLISHED WITHOUT PREVIOUS SURVEYS NECESSARILY ORIGINATING ON MONUMENTS DIFFERING FROM THOSE THAT CURRENTLY CONTROL THE AREA. IT SHALL BE THE RESPONSIBILITY OF THE GOVERNMENTAL AGENCY OR OTHERS PERFORMING CONSTRUCTION WORK TO PROVIDE FOR THE MONUMENTATION REQUIRED BY THIS SECTION. IT SHALL BE THE DUTY OF EVERY LAND SURVEYOR OR CIVIL ENGINEER TO COOPERATE WITH THE GOVERNMENTAL AGENCY IN MATTERS OF MAPS, FIELD NOTES, AND OTHER PERTINENT RECORDS. MONUMENTS SET TO MARK THE LIMITING LINES OF HIGHWAYS, ROADS, STREETS OR RIGHT-OF-WAY OR EASEMENT LINES SHALL NOT BE DEEMED ADEQUATE FOR THIS PURPOSE UNLESS SPECIFICALLY NOTED ON THE CORNER RECORD OR RECORD OF SURVEY OF THE IMPROVEMENT WORKS WITH DIRECT TIES IN BEARING OR AZIMUTH AND DISTANCE BETWEEN THESE AND OTHER MONUMENTS OF RECORD.

   C) CONTRACTOR SHALL COORDINATE WITH THE LAND SURVEYOR OF RECORD, PRIOR TO STARTING CONSTRUCTION, TO IDENTIFY ALL SURVEY MONUMENTS THAT MAY BE SUBJECT TO DISTURBANCE AND SHALL INCLUDE COSTS FOR MONUMENT PRESERVATION, REPLACEMENT, AND PREPARATION OF CORNER RECORDS OR RECORD OF SURVEY IN CONTRACTOR'S BID.

   D) THE DECISION TO FILE EITHER THE REQUIRED CORNER RECORD OR A RECORD OF SURVEY PURSUANT TO SUBDIVISION (B) SHALL BE AT THE ELECTION OF THE LICENSED LAND SURVEYOR OR REGISTERED CIVIL ENGINEER SUBMITTING THE DOCUMENT, AT CONTRACTOR'S EXPENSE.

   §732.5, §1492.5, §1810.5 OF THE CALIFORNIA STREETS AND HIGHWAYS CODES STATE:
   SURVEY MONUMENTS SHALL BE PRESERVED, REFERENCED, OR REPLACED PURSUANT TO SECTION 8771 OF THE BUSINESS AND PROFESSIONS CODE.

SITE LAYOUT NOTES

1. SEE ARCHITECTURAL PLANS FOR ALL BUILDING DETAILS, STRUCTURAL DETAILS, FOOTING DETAILS, UTILITY POINTS OF CONNECTION, ROOF DRAIN LOCATIONS, ADA PATH OF TRAVEL, ADA SIGNAGE, ADA ACCESSIBILITY DETAILS, TRUNCATED DOME LOCATIONS, ENTRY MONUMENTS, GENERAL SIGNAGE, PARKING LOT STRIPING AND SITE PLAN CONSTRAINTS.

2. SEE PLUMBING PLANS FOR CONTINUATION OF UTILITIES WITHIN 5 FEET OF THE BUILDING.

3. SEE LANDSCAPE PLANS FOR ALL LANDSCAPE IMPROVEMENTS INCLUDING LANDSCAPE IRRIGATION, LANDSCAPE AREA GRADING, LANDSCAPE SLEEVE CROSSINGS AND LANDSCAPE SLOPE TREATMENT. ANY AND ALL LANDSCAPE REMOVAL OR RELOCATION.

4. SEE ELECTRICAL PLANS FOR DRY UTILITY LAYOUT, DRY UTILITY DETAILS AND SPECIFICATIONS, MODIFICATIONS TO EXISTING DRY UTILITIES, SITE LIGHTING LOCATIONS AND DETAILS, POINTS OF CONNECTION, AND SLEEVE CROSSINGS. ANY AND ALL ELECTRICAL REMOVAL OR RELOCATION.

5. GEOTECHNICAL REPORTS OR ADDENDUMS MAY EXIST IN WHICH CASE THE CONTRACTOR SHALL CONTACT THE CLIENT PRIOR TO CONSTRUCTION TO ENSURE THAT ALL REPORTS AND ADDENDUMS HAVE BEEN PROVIDED. CONTRACTOR SHALL REVIEW ALL REPORTS AND ADDENDUMS THEN NOTIFY NORTHSTAR ENGINEERING SHOULD A CONFLICT IS FOUND OR DESIGN SHOWN ON THESE PLANS DOES NOT MEET THE GEOTECHNICAL ENGINEERS RECOMMENDATIONS.

6. STRIPING SHALL BE APPLIED PER CITY STANDARDS AS SHOWN ON THIS PLAN SET. ADDITIONALLY STRIPING AND SIGNAGE INFORMATION SHALL FOLLOW MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) LATEST EDITION, MUTCD CALIFORNIA SUPPLEMENTS.

7. FLATWORK SHALL BE INSTALLED WITH CRACK CONTROL JOINTS AT APPROPRIATE SPACING.

8. CONSTRUCT CONTROL AND CONSTRUCTION JOINTS IN ACCORDANCE WITH CURRENT PORTLAND CEMENT ASSOCIATION GUIDELINES AND CITY STANDARDS; USE WHICH EVER IS MORE STRINGENT. SEE GEOTECHNICAL REPORT FOR ADDITIONAL PCC RECOMMENDATIONS.

9. ANY UNSUITABLE MATERIAL ENCOUNTERED AT OR BELOW GRADE SHALL BE COMPLETELY REMOVED TO THE FULL DEPTH AND REPLACED WITH COMPACTED ENGINEERED FILL OR APPROVED IMPORT SOILS.

10. GEOTECHNICAL ENGINEER SHALL VERIFY MOISTURE CONTENT AND CONDITIONING PRIOR TO POURING ANY CONCRETE OR ASPHALT.

11. PRIOR TO CONSTRUCTION CONTRACTOR SHALL REVIEW EXISTING GRADES ALONG SAWCUT LINE AND TRANSITIONS TO MATCH EXISTING IMPROVEMENTS TO ENSURE BOTH DRAINAGE FLOW IS CONTINUOUS AND UNINTERRUPTED AND ACCESSIBILITY REQUIREMENTS ARE BEING MET.

12. CONTRACTOR SHALL ADJUST ANY AND ALL BOXES, STRUCTURES, ETC. TO FINISH GRADE WITH TRAFFIC RATED LID FOR VEHICULAR AREAS AND ACCESSIBLE LID FOR PEDESTRIAN AREAS BASED ON PROPOSED GRADING DESIGN SHOWN IN THIS PLAN SET. SEE ARCHITECTURAL PLANS, SEE LANDSCAPE ARCHITECT PLANS.

13. CONTRACTOR SHALL MAINTAIN EROSION RESISTANT VEGETATION ON FACE OF ALL SLOPES.

14. ALL PROPOSED A.C. PAVING SHALL BE FOG SEALED PER SECTION 37 OF CALTRANS STANDARD & SPECIFICATIONS, THE LATEST EDITION. FOG SEALING SHALL BE APPLIED AT LEAST NINE MONTHS AFTER THE PAVING IS INSTALLED, BUT NO LATER THAN EIGHTEEN MONTHS AFTER PAVING IS INSTALLED. CONTRACTOR SHALL RESTRIPE PAVEMENT AS NECESSARY. RESTRIPING SHALL CONFORM TO THE PROJECT PLANS AND SPECIFICATIONS.

CALL BEFORE YOU DIG USA 800-227-2600

REGISTERED PROFESSIONAL ENGINEER No. C89551 CIVIL STATE OF CALIFORNIA
PRELIMINARY NOT FOR CONSTRUCTION

NO.	DESCRIPTIONS	DATE	APPROVED
	REVISIONS		

GENERAL NOTES AND SPECIFICATIONS

CIVIL IMPROVEMENT PLANS FOR
CANAL STREET AND CHILDS AVENUE
MERCED, CALIFORNIA

NorthStar Engineering Group, Inc.
• CIVIL ENGINEERING • SURVEYING • PLANNING •
620 12th Street Modesto, CA 95354
(209) 524-3525 Phone (209) 524-3526 Fax

JOB #:	server\
DATE:	06/30/2025
SCALE:	AS SHOWN
DRAWN:	TT
DESIGN:	CVV
CHK'D:	CVV

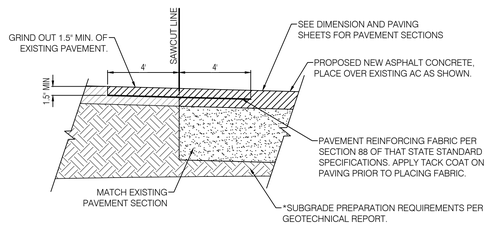
SHEET NUMBER

C1.3

PLOTTED: 07/01/2025 08:32 PLOTTED BY: Cvanderveen
DWGNAME: \\Nserver\northstar-data\23-3406 City of Merced Canal St & Childs Ave Project\Civil\Imp Plans\C1.3 NTS.dwg

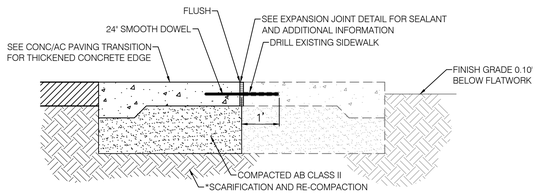
CITY OF MERCED STANDARD DETAILS

1. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL OBTAIN THE MOST UP TO DATE CITY STANDARDS FOR REFERENCE PRIOR TO AND DURING CONSTRUCTION.
2. THE LATEST COPY OF THE CITY OF MERCED STANDARDS SHALL BE CONSIDERED PART OF THIS PLAN SET.
3. IN THE EVENT OF A DISCREPANCY BETWEEN THIS PLAN SET AND CITY STANDARDS; THE CITY STANDARDS SHALL PREVAIL.



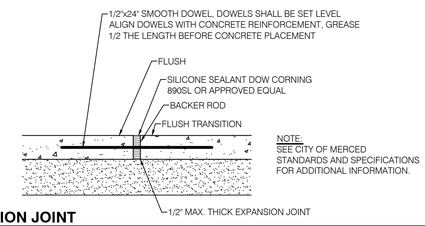
*NOTE:
1. *SUBGRADE PREPARATION REQUIREMENTS PER GEOTECHNICAL REPORT, CITY OF MERCED STANDARDS AND SPECIFICATIONS, AND PROJECT SPECIFICATIONS.
2. LAP JOINT SHALL APPLY AT ALL SAWCUT LOCATIONS ALONG ALL PAVEMENT UNLESS OTHERWISE NOTED.

1 LAP JOINT DETAIL
NTS

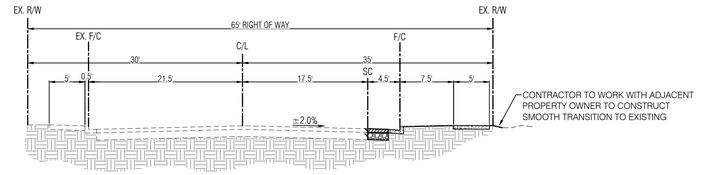


*NOTE:
1. *SUBGRADE PREPARATION REQUIREMENTS PER GEOTECHNICAL REPORT.
2. AT EXPANSION JOINT USE 1/2 "x24" SMOOTH DOWELS, 18" OC GREASE 1/2 THE LENGTH BEFORE CONCRETE PLACEMENT. SEE EXPANSION JOINT DETAIL THIS SHEET.
3. CONSTRUCT CONTROL AND CONSTRUCTION JOINTS IN ACCORDANCE WITH CURRENT PORTLAND CEMENT ASSOCIATION GUIDELINES.
4. SEE STRUCTURAL SECTIONS ON DIMENSIONS AND PAVING PLANS: SHEET C3.1

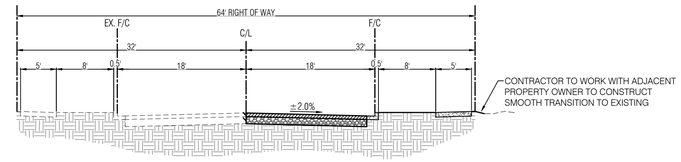
2 CONCRETE FLATWORK AT EXISTING FLATWORK
NTS



3 EXPANSION JOINT
NTS



A 65' RIGHT-OF-WAY LOCAL STREET SECTION
NTS



B 64' RIGHT-OF-WAY LOCAL STREET SECTION
NTS

STREET SECTION TABLE

STREET NAME	TYP. CROSS-SECTION	STRUCTURAL SECTION (A.C. / A.B.)**	SUBGRADE SECTION	TRAFFIC INDEX (T.I.)	RESISTANCE VALUE ("R") *	SIDEWALK
W. CHILDS AVE	A	2.5" / 6.0"***	12" (95% R.C.)	6	*	4" PCC / 4"AB
S. CANAL ST	B	2.5" / 8.5"***	12" (95% R.C.)	6	*	4" PCC / 4"AB

* R-VALUE TESTS SHALL BE PERFORMED BY GEOTECHNICAL ENGINEER ONCE PAVEMENT SUBGRADE IS ESTABLISHED TO CONFIRM THE PAVEMENT SECTION DESIGN.

** USE STRUCTURAL SECTION LISTED OR MATCH EXISTING, WHICH EVER IS GREATER. GEOTECHNICAL ENGINEER TO VERIFY STRUCTURAL SECTION PRIOR TO CONSTRUCTION.

*** STRUCTURAL SECTION VALUES TAKEN FROM "PLEASANTON PARK IMPROVEMENT PLANS" RECORD DRAWING DATED 5/11/1981 AND "IMPROVEMENT PLANS FOR CYPRESS TERRACE PH 3 & 4" RECORD DRAWING DATED DECEMBER 2003

REGISTERED PROFESSIONAL ENGINEER
CHRISTOPHER V. VIERRA
No. 83438
CIVIL
STATE OF CALIFORNIA

PRELIMINARY PLANS
NOT FOR CONSTRUCTION

REVISIONS

NO.	DESCRIPTIONS	DATE	APPROVED

DETAILS AND CROSS SECTIONS

CIVIL IMPROVEMENT PLANS FOR
CANAL STREET AND CHILDS AVENUE
MERCED, CALIFORNIA

NorthStar
Engineering Group, Inc.
• CIVIL ENGINEERING • SURVEYING • PLANNING •
620 12th Street Modesto, CA 95354
(209) 524-3525 Phone (209) 524-3526 Fax

JOB #:	server\
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DESIGN:	CVV
CHK'D:	CVV

SHEET NUMBER

C1.4

PLOTTED: 7/10/2025 08:47 PLOTTED BY: Cvandeven
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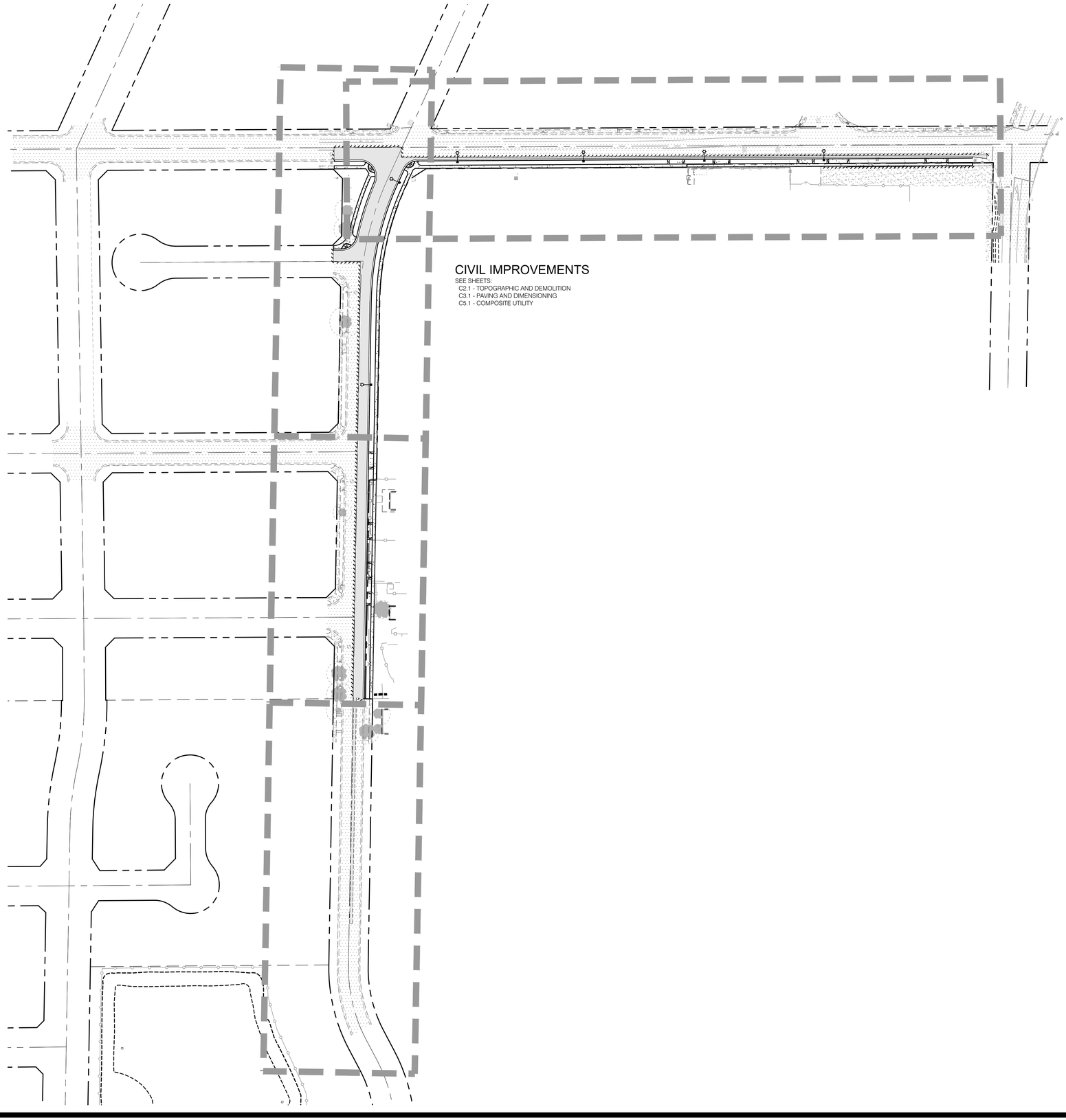
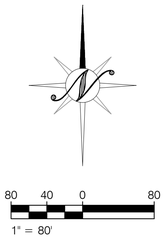


CIVIL IMPROVEMENTS

SEE SHEETS:
C2.1 - TOPOGRAPHIC AND DEMOLITION
C3.1 - PAVING AND DIMENSIONING
C5.1 - COMPOSITE UTILITY



REGISTERED PROFESSIONAL ENGINEER
PRELIMINARY
NOT FOR CONSTRUCTION
CIVIL
STATE OF CALIFORNIA

NO.	DESCRIPTIONS	DATE	APPROVED

REVISIONS

OVERALL SITE PLAN

CIVIL IMPROVEMENT PLANS FOR CANAL STREET AND CHILDS AVENUE MERCED, CALIFORNIA

NorthStar Engineering Group, Inc.
• CIVIL ENGINEERING • SURVEYING • PLANNING •
620 12th Street Modesto, CA 95354
(209) 524-3525 Phone (209) 524-3526 Fax

JOB #:	23-3406
DATE:	06/30/2025
SCALE:	AS SHOWN
DRAWN:	TT
DESIGN:	CW
CHK'D:	CW

SHEET NUMBER

C1.5

PLOTTED: 06/30/2025 16:52 PLOTTED BY: Tmahen
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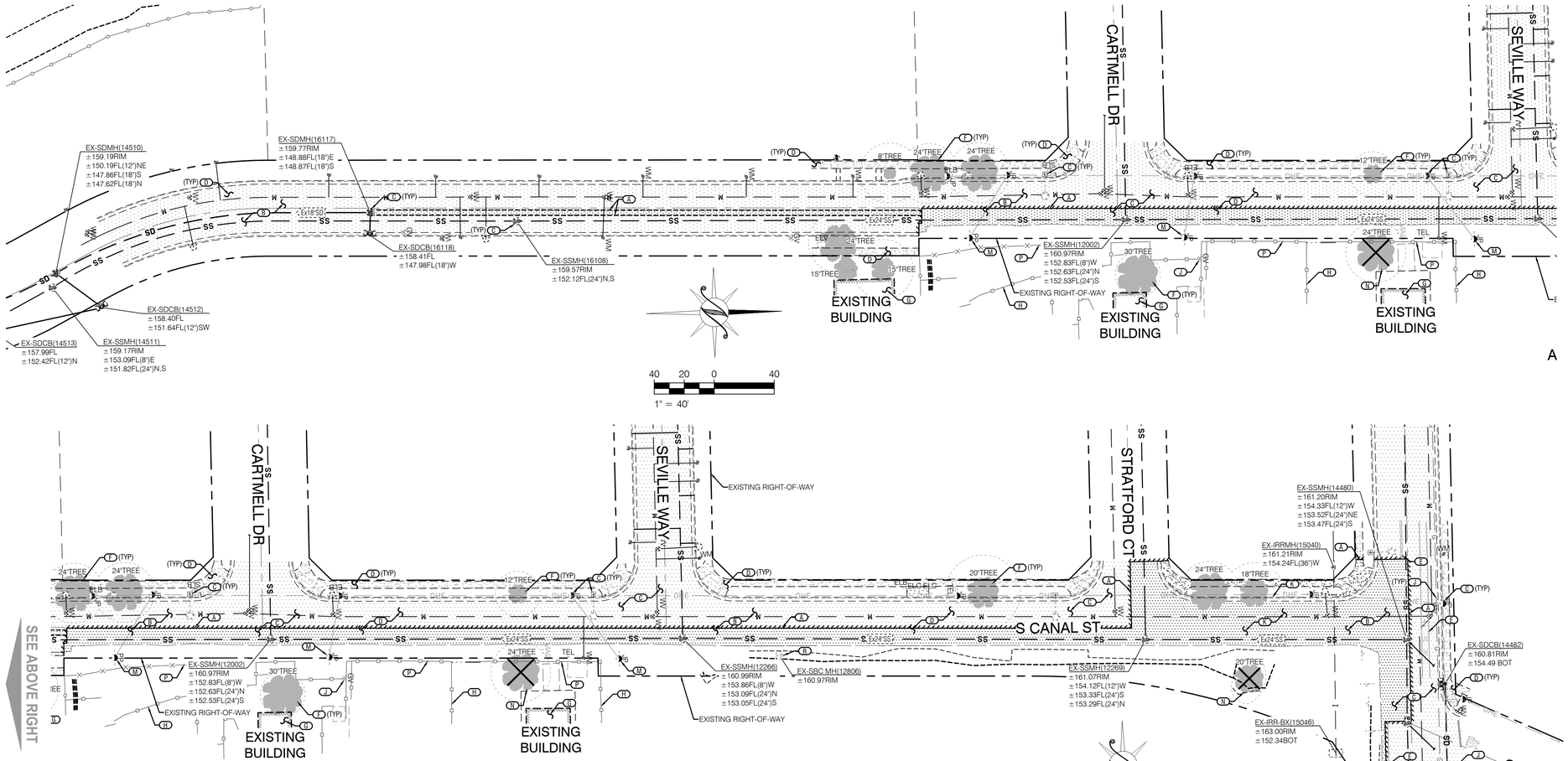

LEGEND

- EXISTING CONCRETE
- EXISTING PAVEMENT
- EXISTING CONCRETE TO BE REMOVED
- EXISTING PAVEMENT TO BE REMOVED

KEY NOTES

(A) SAWCUT AND REMOVE EXISTING PAVEMENT, CONCRETE, AND OR CURB AS REQUIRED PER THESE PLANS. CONTRACTOR MAY NEED TO FIELD ADJUST SAWCUT LINE TO REMOVE THE PAVEMENT OR CONCRETE SECTION AT A CLEAN EDGE OR NEAREST JOINT BASED ON FIELD CONDITIONS WHILE MAINTAINING ACCESSIBLE TRANSITION TO PROVIDE COMPLIANCE WITH ACCESSIBILITY STANDARDS, WHERE APPLICABLE. LAP JOINT PER DETAIL 1 ON SHEET C1.4 SHALL APPLY TO ALL SAWCUT LOCATIONS ALONG AC PAVEMENT, UNLESS OTHERWISE NOTED.

(B) CONTRACTOR SHALL "USE EXTREME CAUTION" THROUGHOUT THE COURSE OF CONSTRUCTION AS ADDITIONAL UNDERGROUND LINES AND STRUCTURES NOT SHOWN ON THIS PLAN MAY EXIST AND ARE NOT CLEARLY MARKED OR VISIBLE FROM THE SURFACE. ADDITIONALLY CONTRACTOR SHALL USE EXTREME CAUTION WHILE WORKING BY LOW HANGING POWER LINES. IN CONJUNCTION WITH CONTACTING USA TO LOCATE UNDERGROUND UTILITIES WITHIN THE PUBLIC RIGHT-OF-WAY IT IS HIGHLY RECOMMENDED THAT THE CONTRACTOR UTILIZE (GPR) GROUND PENETRATING RADAR UNDERGROUND SERVICES TO IDENTIFY UTILITIES THAT MAY NOT BE VISIBLE FROM THE SURFACE.

(C) "USE EXTREME CAUTION" CONTRACTOR SHALL PROTECT EXISTING STRUCTURES, OVERHEAD LINES AND UNDERGROUND UTILITIES THROUGHOUT THE COURSE OF CONSTRUCTION AND REPAIR/REPLACE IF DAMAGED DURING CONSTRUCTION, AT CONTRACTORS EXPENSE. COORDINATE WITH APPROPRIATE CONSULTANT AND/OR AGENCY FOR ANY RELOCATION OR REMOVAL. CONTRACTOR SHALL ADJUST TO PROPOSED GRADE AS NECESSARY.

(D) CONTRACTOR SHALL PROTECT EXISTING CONCRETE, CURB AND/OR PAVEMENT THROUGHOUT THE COURSE OF CONSTRUCTION AND REPAIR/REPLACE IF DAMAGED DURING CONSTRUCTION, AT CONTRACTORS EXPENSE. SEE KEYNOTE "A" ABOVE.

(E) CONTRACTOR SHALL PROTECT EXISTING STRIPING AND SIGNAGE THROUGHOUT THE COURSE OF CONSTRUCTION AND REPAIR/REPLACE IF DAMAGED DURING CONSTRUCTION, AT CONTRACTORS EXPENSE.

(F) CONTRACTOR SHALL PROTECT EXISTING TREE, SHRUB, AND ROOTS THROUGHOUT THE COURSE OF CONSTRUCTION. EXCAVATION AND GRADING SHOULD BE KEPT TO A MINIMUM AND NOTIFY THE OWNER IMMEDIATELY SHOULD THE TREE NEED TO BE REMOVED TO COMPLETE IMPROVEMENTS.

(G) CONTRACTOR SHALL PROTECT EXISTING BUILDING THROUGHOUT THE COURSE OF CONSTRUCTION AND REPAIR/REPLACE IF DAMAGED DURING CONSTRUCTION, AT CONTRACTOR'S EXPENSE.

(H) CONTRACTOR SHALL PROTECT EXISTING FENCE, GATE AND/OR MOWSTRIP THROUGHOUT THE COURSE OF CONSTRUCTION AND REPAIR/REPLACE IF DAMAGED DURING CONSTRUCTION, AT CONTRACTOR'S EXPENSE.

(J) CONTRACTOR SHALL "USE EXTREME CAUTION" WHEN PERFORMING CONSTRUCTION ACTIVITIES NEAR EXISTING GAS LINE STRUCTURES AND/OR UNDERGROUND UTILITIES. SEE KEYNOTE "C" FOR ADDITIONAL INFORMATION.

(K) CONTRACTOR SHALL REMOVE EXISTING CONCRETE, CURB, AND/OR PAVEMENT AS SHOWN AND DISPOSE OF OFF-SITE AT THE CONTRACTOR'S EXPENSE. SEE KEYNOTE "A" ABOVE FOR ADDITIONAL INFORMATION.

(L) CONTRACTOR SHALL RELOCATE EXISTING SIGN. CONTRACTOR SHALL COORDINATE WITH PROPERTY OWNER FOR ANY SALVAGING OF MATERIALS, OTHERWISE, CONTRACTOR SHALL DISPOSE OF OFFSITE AT THE CONTRACTOR'S EXPENSE.

(M) CONTRACTOR SHALL RELOCATE EXISTING UTILITY POLE.

(N) CONTRACTOR SHALL REMOVE EXISTING TREE AND DISPOSE OF OFFSITE AT THE CONTRACTORS EXPENSE.

(P) CONTRACTOR SHALL REMOVE EXISTING FENCE UP TO RIGHT OF WAY AND DISPOSE OF OFFSITE AT THE CONTRACTOR'S EXPENSE.

(R) CONTRACTOR SHALL RELOCATE EXISTING ELECTRICAL MANHOLE.

(S) CONTRACTOR SHALL RELOCATE EXISTING WATER STRUCTURE. CONTRACTOR SHALL COORDINATE WITH PROPERTY OWNER FOR NEW LOCATION OF STRUCTURE.

CALL BEFORE YOU DIG 811 USA 800-227-2600

REGISTERED PROFESSIONAL ENGINEER CHRISTOPHER V. WAHLEN No. 81318 CIVIL STATE OF CALIFORNIA

PRELIMINARY NOT FOR CONSTRUCTION

NO.	DESCRIPTIONS	DATE	APPROVED
	REVISIONS		

TOPOGRAPHIC AND DEMOLITION PLAN

CIVIL IMPROVEMENT PLANS FOR
CANAL STREET AND CHILDS AVENUE
MERCED, CALIFORNIA

NorthStar Engineering Group, Inc.
• CIVIL ENGINEERING • SURVEYING • PLANNING •
620 12th Street Modesto, CA 95354
(209) 524-3525 Phone (209) 524-3526 Fax

JOB #:	23-3406
DATE:	06/30/2025
SCALE:	AS SHOWN
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DESIGN:	CW
CHKD:	CW

SHEET NUMBER

C2.1

PLOTTED: 06/30/2025, 17:13 PLOTTED BY: Tayloen
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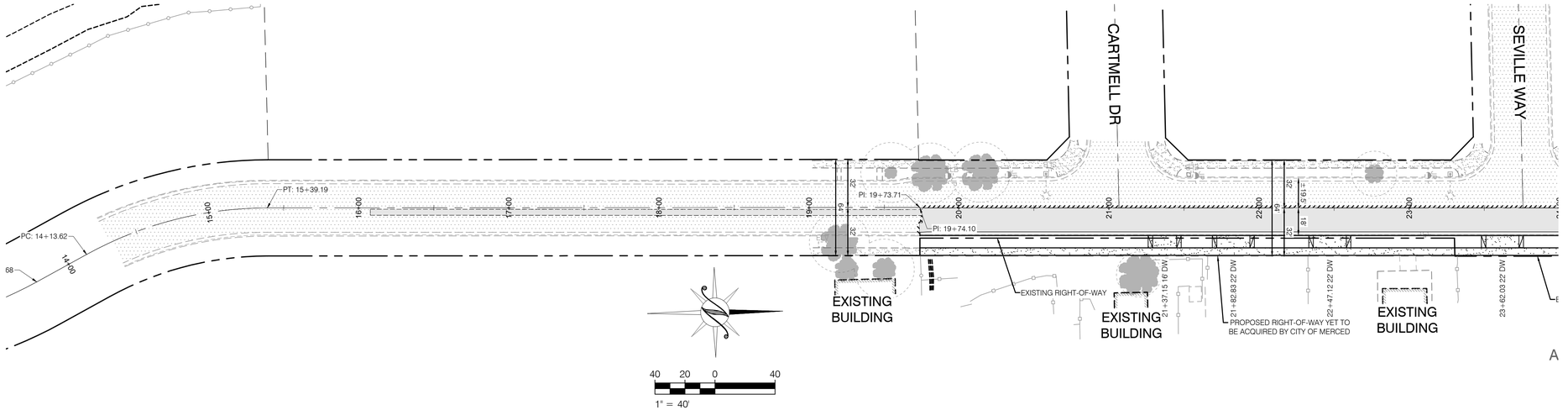

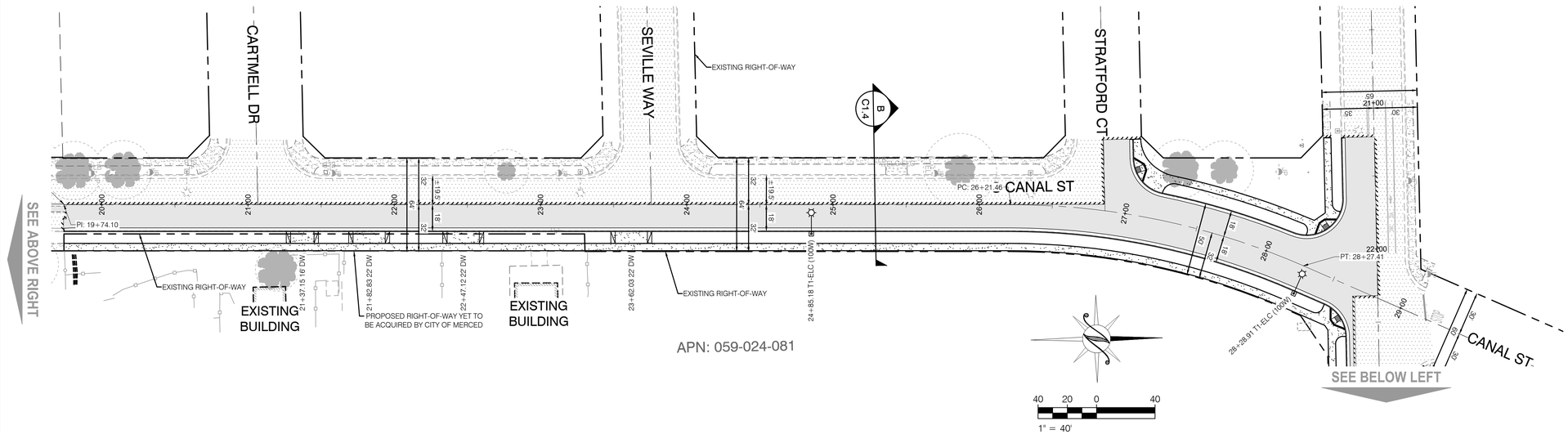

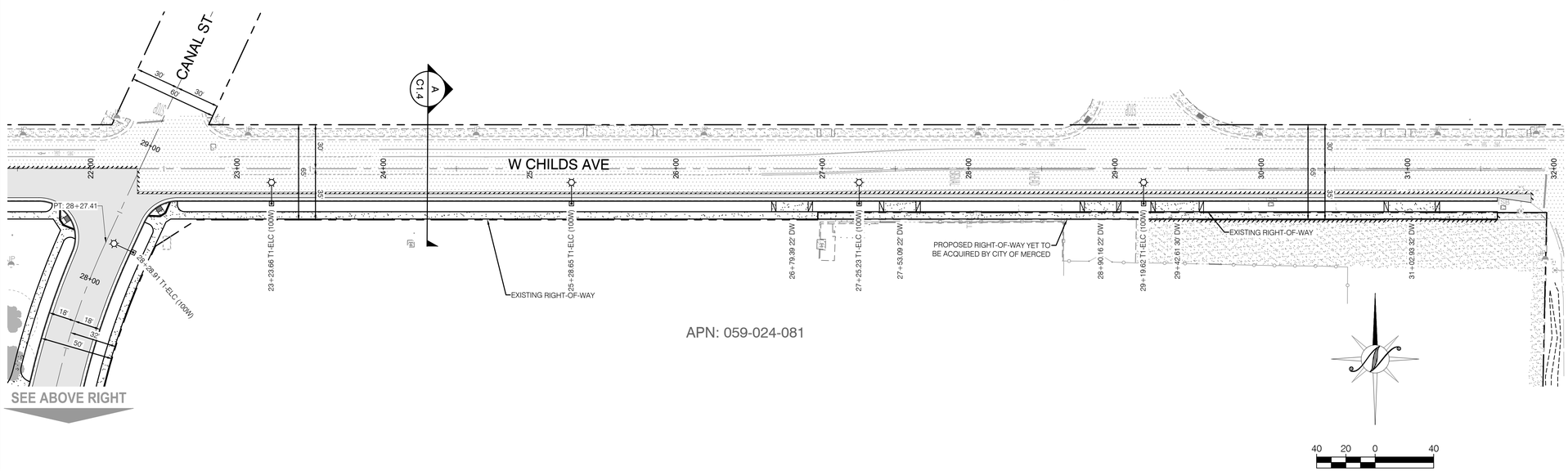

LEGEND

- EXISTING CONCRETE
- EXISTING PAVEMENT
- PROPOSED ASPHALT (SEE NOTE 3)
- PROPOSED CONCRETE (SEE NOTE 3)

SITE PLAN GENERAL NOTES

1. ALL DIMENSIONS AS SHOWN ON THIS PLAN ARE TAKEN FROM EITHER THE CENTERLINE, CENTERLINE MONUMENT, FACE OF CURB, EDGE OF SIDEWALK, CENTERLINE OF STRIPING, AND OR PROPOSED/ EXISTING RIGHT-OF-WAY. REFER TO CROSS-SECTIONS OF SHEET C1.4.
2. CONTRACTOR TO REFER TO PROJECT FINAL MAP FOR LOCATING, ORIENTATION, AND ALIGNMENT OF PROPOSED CENTERLINES, LOT LINES, RIGHT-OF-WAYS, AND EASEMENTS, IF THERE IS A DISCREPANCY BETWEEN THESE PLANS AND THE PROJECT FINAL MAP, CONTRACTOR TO NOTIFY THE ENGINEER IMMEDIATELY.
3. CONTRACTOR SHALL CONSTRUCT PAVEMENT, CURB, GUTTER, AND SIDEWALK SECTIONS AS SHOWN ON THESE PLANS. PAVEMENT SECTION TO BE IN ACCORDANCE WITH STREET SECTION TABLE ON SHEET C1.4 AND PER CITY OF MERCED STANDARDS AND SPECIFICATIONS.
4. CONTRACTOR SHALL CONSTRUCT 6" VERTICAL CURB, GUTTER, AND SIDEWALK IN ACCORDANCE WITH CITY OF MERCED STANDARD DETAIL SCG-1 AND IN ACCORDANCE WITH CITY STANDARD SPECIFICATIONS.
5. CONTRACTOR SHALL CONSTRUCT ADA ACCESSIBLE CURB RAMPS IN ACCORDANCE WITH CITY OF MERCED STANDARD DETAIL SCG-2 AND IN ACCORDANCE WITH CITY STANDARD SPECIFICATIONS AND THE 2024 CALIFORNIA BUILDING CODE.
6. CONTRACTOR SHALL CONSTRUCT EXPANSION JOINTS PER DETAIL 3 ON SHEET C1.4 AND CITY STANDARD SPECIFICATIONS AT ALL LOCATIONS WHERE PROPOSED AND FUTURE CONCRETE IMPROVEMENTS ABUT.
7. CONTRACTOR SHALL CONSTRUCT LAP JOINT PER DETAIL 1 ON SHEET C1.4 AT ALL LOCATIONS WHERE PROPOSED AND EXISTING ASPHALT ABUT.
8. TRUNCATED DOMES TO BE CAST IN PLACE REPLACEABLE BY ADA SOLUTIONS OR EQUAL. REFER TO CITY OF MERCED STANDARD DETAIL SCG-2.
9. CONTRACTOR SHALL CONSTRUCT SURVEY MONUMENT FRAME AND COVER IN ACCORDANCE WITH CITY OF MERCED STANDARD DETAIL M-1.

CALL BEFORE YOU DIG 811 800-227-2600

REGISTERED PROFESSIONAL ENGINEER CHRISTOPHER V. WOOD No. 81418 CIVIL STATE OF CALIFORNIA

PRELIMINARY NOT FOR CONSTRUCTION

NO.	DESCRIPTIONS	DATE	APPROVED
	REVISIONS		

DIMENSION AND PAVING PLAN

CIVIL IMPROVEMENT PLANS FOR
CANAL STREET AND CHILDS AVENUE
MERCED, CALIFORNIA

NorthStar Engineering Group, Inc.
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CHKD:	CW

SHEET NUMBER

C3.1

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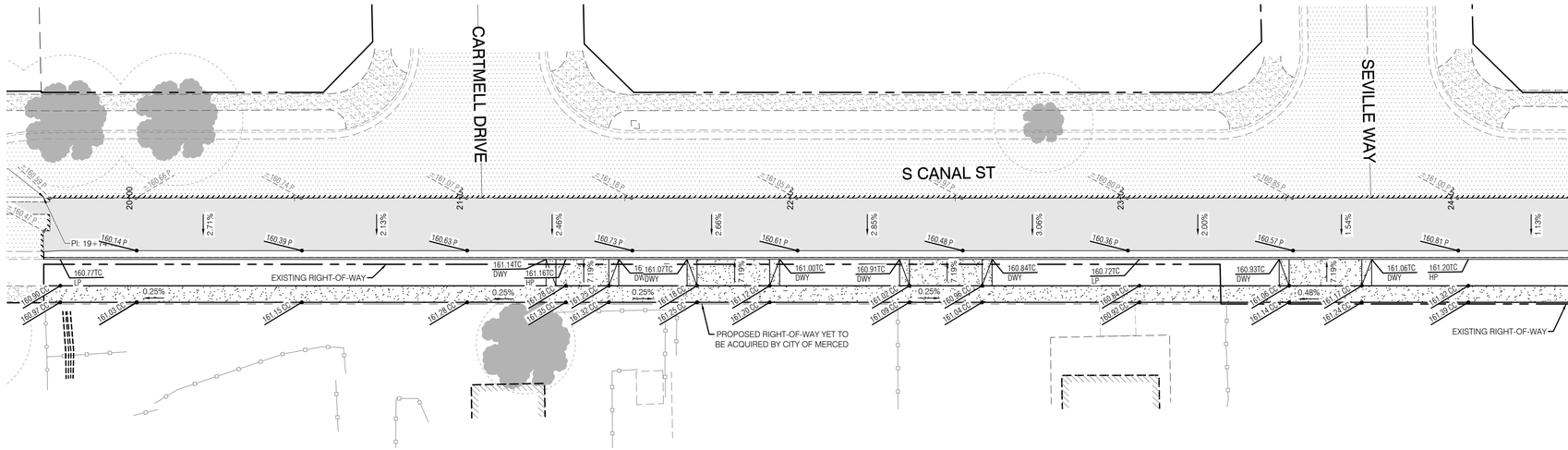

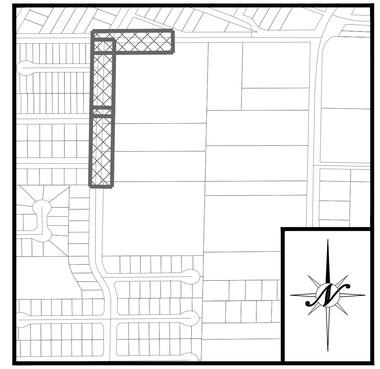

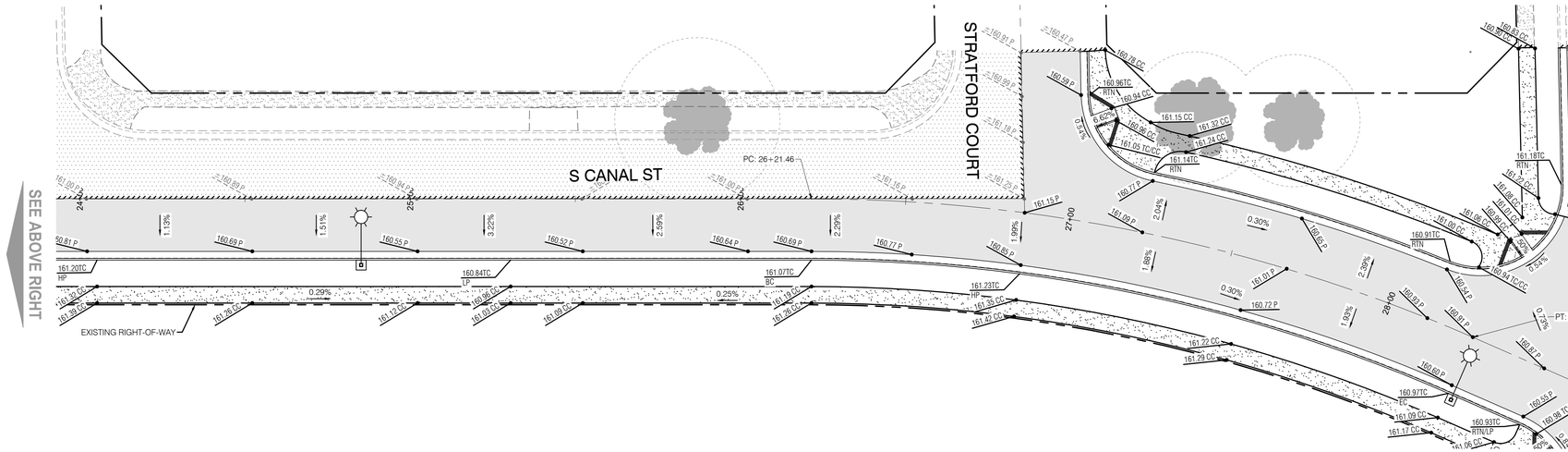

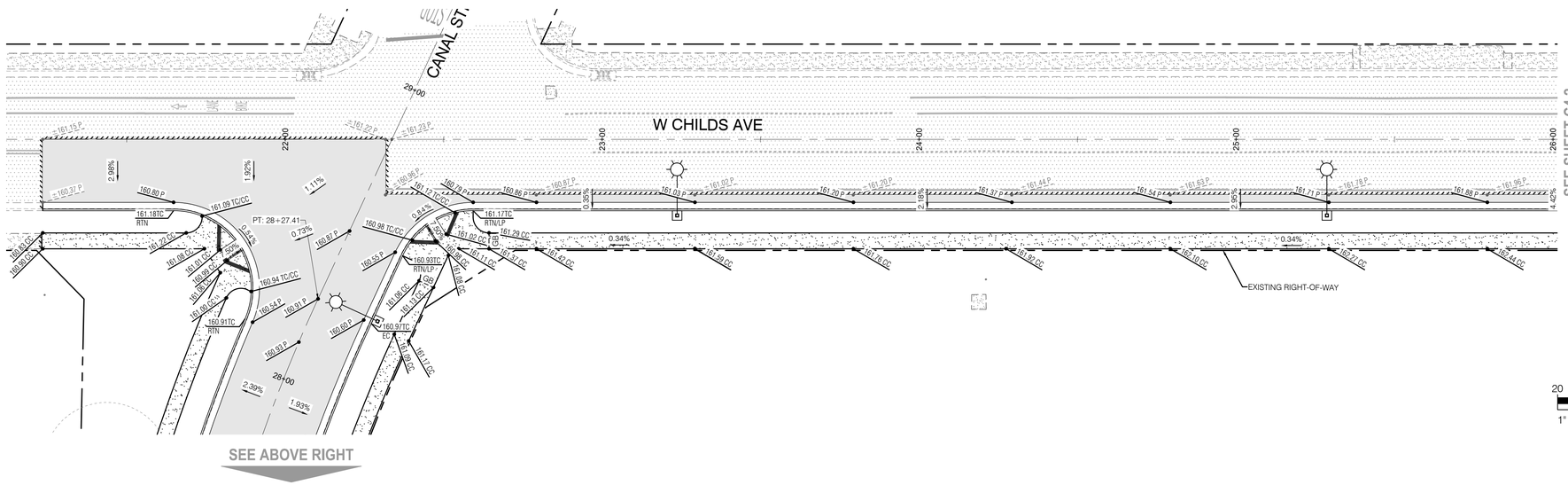

GENERAL GRADING NOTES

1. ALL CURBS, GUTTERS, SIDEWALKS, CURB RETURNS, AND PAVEMENT SECTIONS PER CROSS SECTION ON SHEET C1.4 AND CITY OF MERCED STANDARDS AND SPECIFICATIONS.
2. CONTRACTOR SHALL VERIFY ALL REQUIREMENTS OF THE PROJECT GEOTECHNICAL REPORT FOR SOILS PREPARATION, SUB-GRADE PREPARATION AND OVER-EXCAVATION REQUIREMENTS BEFORE CONSTRUCTION. IF A DISCREPANCY EXISTS, CONTRACTOR TO NOTIFY THE ENGINEER IMMEDIATELY.

SITE PLAN GENERAL NOTES

1. ALL DIMENSIONS AS SHOWN ON THIS PLAN ARE TAKEN FROM EITHER THE CENTERLINE, CENTERLINE MONUMENT, FACE OF CURB, EDGE OF SIDEWALK, CENTERLINE OF STRIPING, AND OR PROPOSED/ EXISTING RIGHT-OF-WAY. REFER TO CROSS-SECTIONS OF SHEET C1.4.
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6. CONTRACTOR SHALL CONSTRUCT EXPANSION JOINTS PER CITY OF MERCED STANDARD DETAIL 3 ON SHEET C1.4 AND CITY STANDARD SPECIFICATIONS AT ALL LOCATIONS WHERE PROPOSED AND FUTURE CONCRETE IMPROVEMENTS ABUT.
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9. CONTRACTOR SHALL CONSTRUCT SURVEY MONUMENT FRAME AND COVER IN ACCORDANCE WITH CITY OF MERCED STANDARD DETAIL M-1.

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REGISTERED PROFESSIONAL ENGINEER TIMOTHY PRESCOTT THORSEN 81318 STATE OF CALIFORNIA

PRELIMINARY PLANS NOT FOR CONSTRUCTION

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GRADING AND DRAINAGE PLAN

CIVIL IMPROVEMENT PLANS FOR CANAL STREET AND CHILDS AVENUE MERCED, CALIFORNIA

NorthStar Engineering Group, Inc.
• CIVIL ENGINEERING • SURVEYING • PLANNING •
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(209) 524-3525 Phone (209) 524-3526 Fax

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SHEET NUMBER

C4.1

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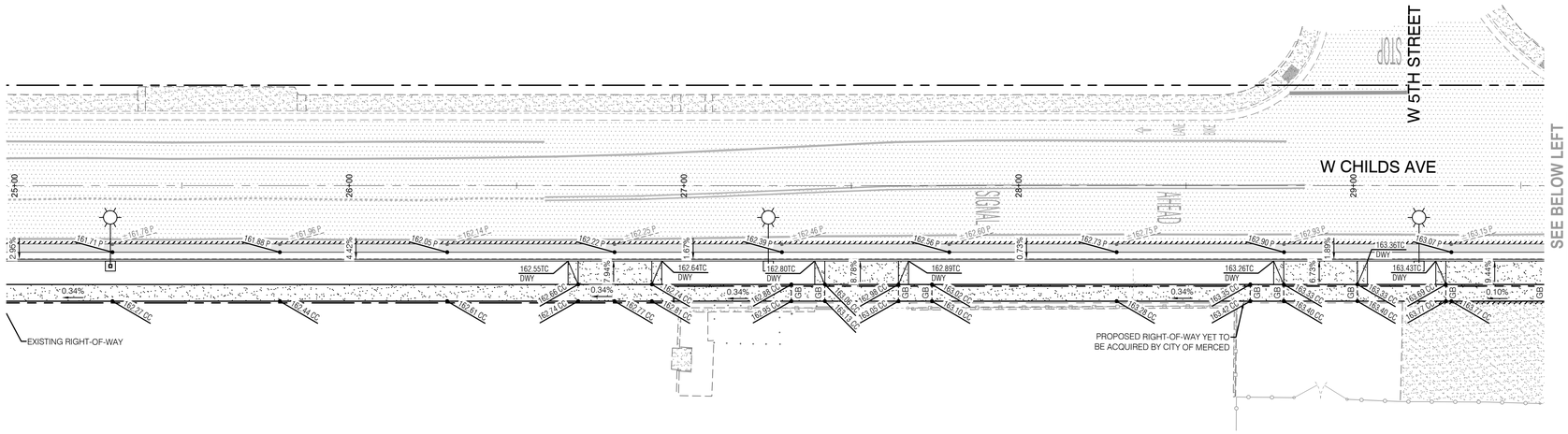

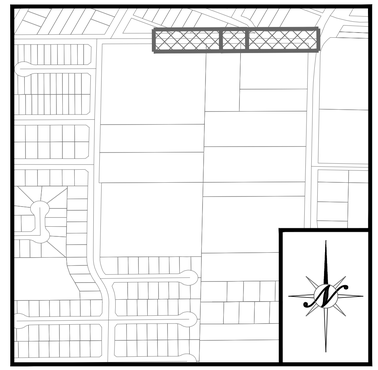

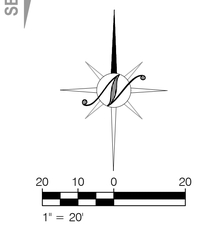

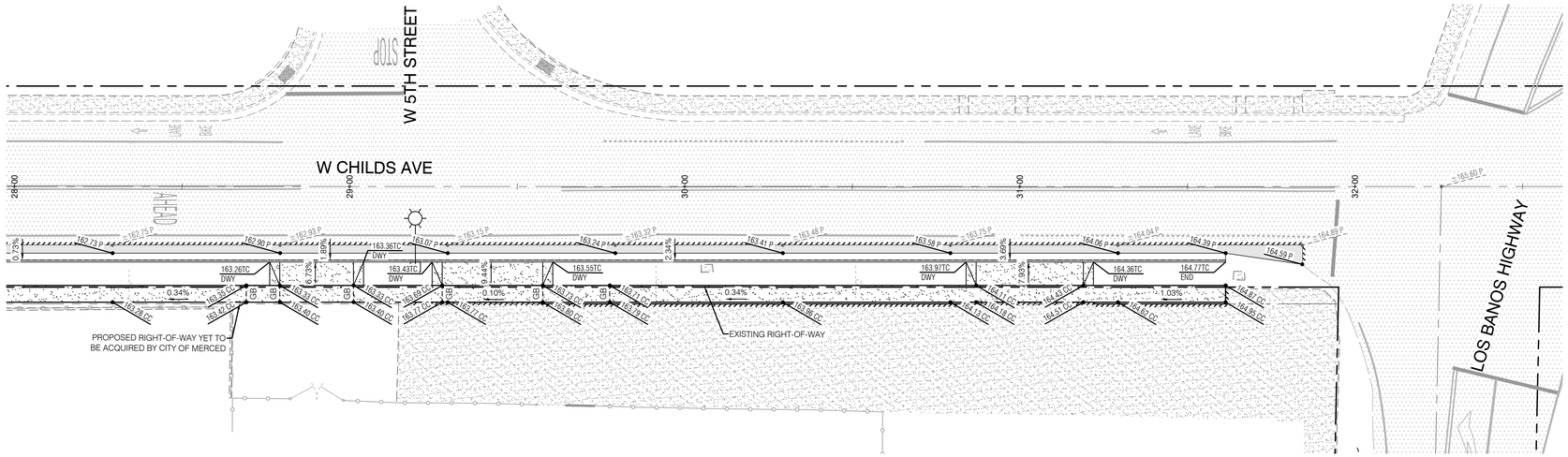

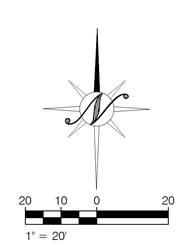

GENERAL GRADING NOTES

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SITE PLAN GENERAL NOTES

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9. CONTRACTOR SHALL CONSTRUCT SURVEY MONUMENT FRAME AND COVER IN ACCORDANCE WITH CITY OF MERCED STANDARD DETAIL M-1.

REGISTERED PROFESSIONAL ENGINEER
TIMOTHY J. THORSEN
No. 81418
CIVIL
STATE OF CALIFORNIA

PRELIMINARY
NOT FOR CONSTRUCTION

NO.	DESCRIPTIONS	DATE	APPROVED

REVISIONS

GRADING AND DRAINAGE PLAN

CIVIL IMPROVEMENT PLANS FOR
CANAL STREET AND CHILDS AVENUE
MERCED, CALIFORNIA

NorthStar Engineering Group, Inc.
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CHK'D:	CVV

SHEET NUMBER

C4.2

PLOTTED: 6/30/2025 1:7:04 PLOTTED BY: Thorsen
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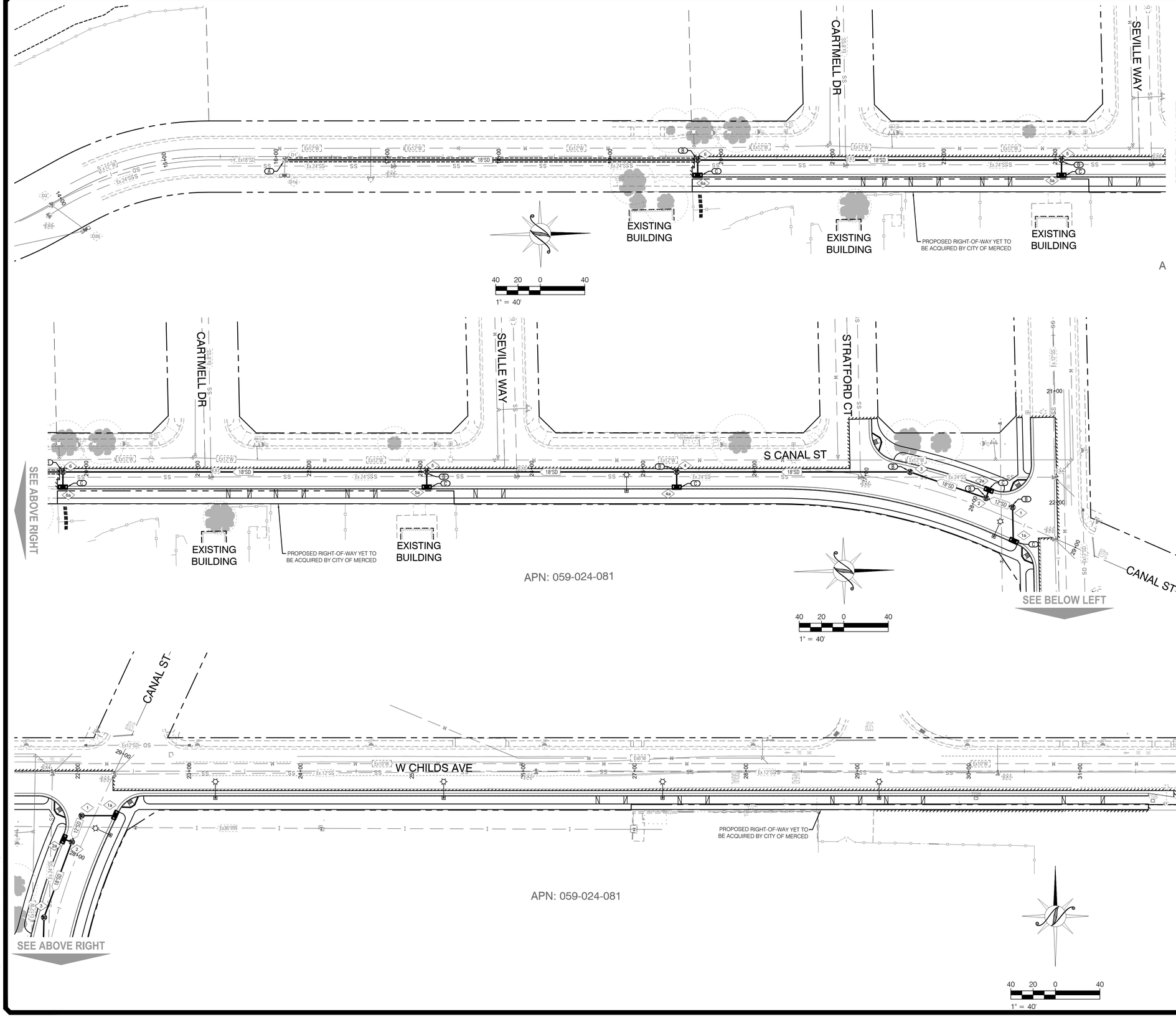

KEY NOTES

SEE TOPOGRAPHIC AND DEMOLITION SHEET C2.1 FOR ADDITIONAL REMOVAL, REPLACEMENT AND PROTECTION NOTES.

1. CONTRACTOR SHALL EXCAVATE EXISTING STORM DRAINAGE MANHOLE TO VERIFY THE HORIZONTAL AND VERTICAL ALIGNMENT PRIOR TO THE INSTALLATION OF THE STORM DRAINAGE SYSTEM. CONTRACTOR SHALL INFORM THE ENGINEER IF THE ALIGNMENTS ARE DIFFERENT THAN SHOWN. CONTRACTOR SHALL CONNECT TO EXISTING STORM DRAINAGE MANHOLE PER CITY OF MERCED STANDARDS AND SPECIFICATIONS.
2. CONTRACTOR SHALL INSTALL 48" STORM DRAIN MANHOLE PER CITY OF MERCED STANDARD DETAIL SD-11.
3. CONTRACTOR SHALL INSTALL CATCH BASIN PER CITY OF MERCED STANDARD DETAIL SD-3.

CALL BEFORE YOU DIG 811 800-227-2600

REGISTERED PROFESSIONAL ENGINEER TIMOTHY J. TAYLOR No. 81711 OF CALIFORNIA

PRELIMINARY NOT FOR CONSTRUCTION

REVISIONS NO.	DESCRIPTIONS	DATE	APPROVED

COMPOSITE UTILITY PLAN

CIVIL IMPROVEMENT PLANS FOR CANAL STREET AND CHILDS AVENUE MERCED, CALIFORNIA

NorthStar Engineering Group, Inc.
• CIVIL ENGINEERING • SURVEYING • PLANNING •
620 12th Street Modesto, CA 95354
(209) 524-3525 Phone (209) 524-3526 Fax

JOB #:	23-3406
DATE:	06/30/2025
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DESIGN:	CVV
CHKD:	CVV

SHEET NUMBER

C5.1

PLOTTED: 06/30/2025 16:53 PLOTTED BY: Taylhen
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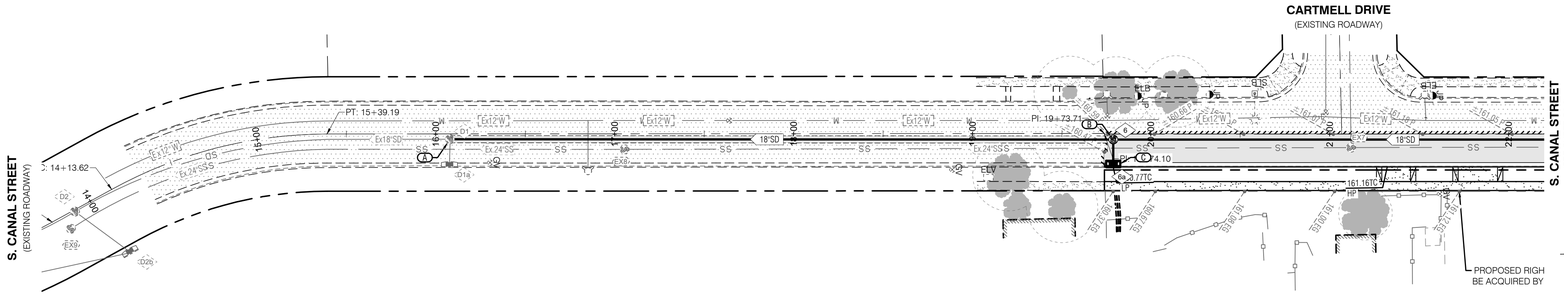
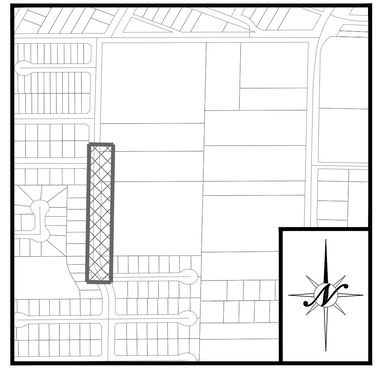
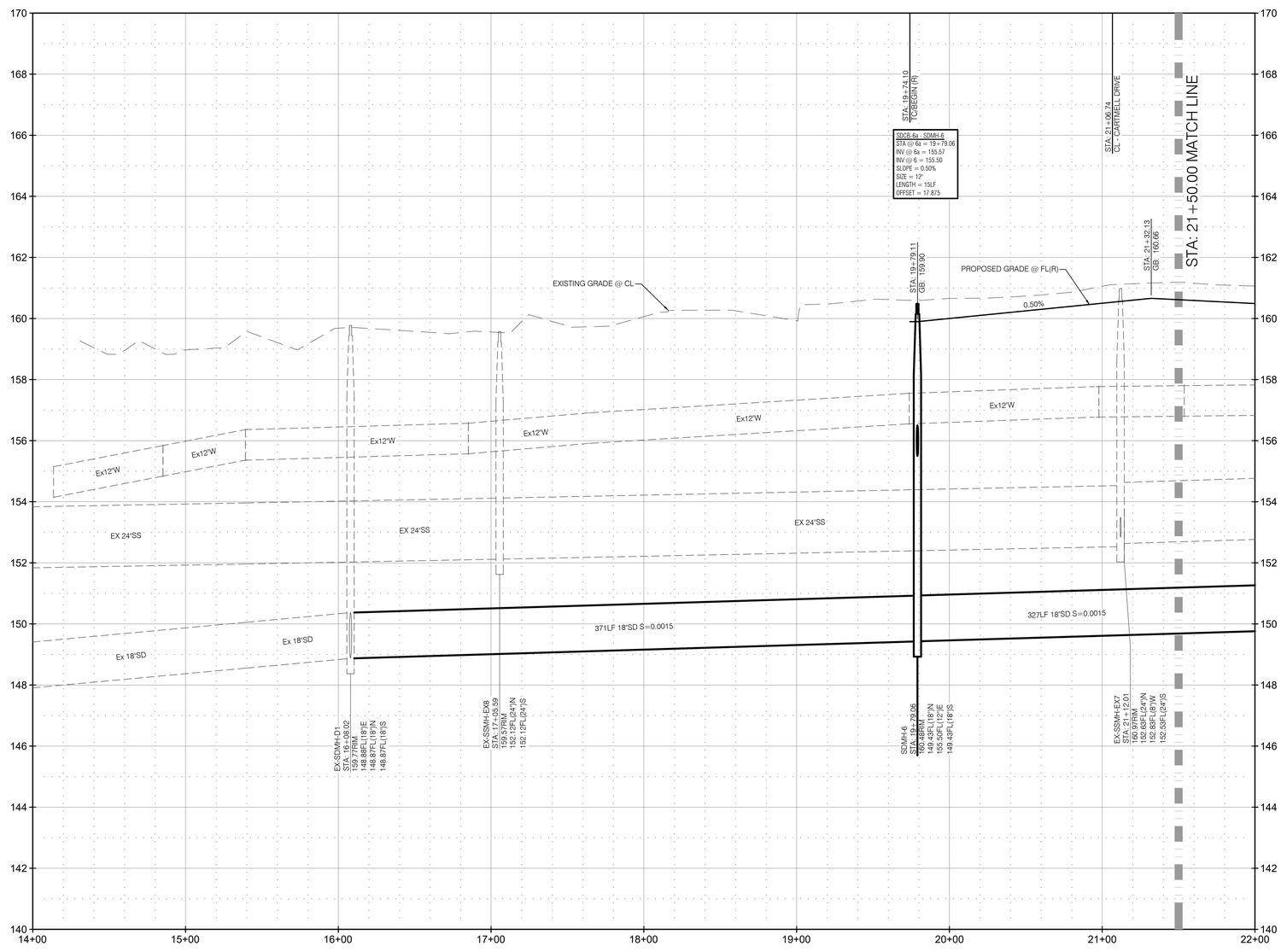




S. CANAL STREET



KEY NOTES

SEE TOPOGRAPHIC AND DEMOLITION SHEET C2.1 FOR ADDITIONAL REMOVAL, REPLACEMENT AND PROTECTION NOTES.

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(B) CONTRACTOR SHALL INSTALL 48" STORM DRAIN MANHOLE PER CITY OF MERCED STANDARD DETAIL SD-11.

(D) CONTRACTOR SHALL INSTALL CATCH BASIN PER CITY OF MERCED STANDARD DETAIL SD-3.

CALL BEFORE YOU DIG 811 USA 800-227-2600

REGISTERED PROFESSIONAL ENGINEER CHRISTOPHER V. WOOD No. 87313 CIVIL STATE OF CALIFORNIA

PRELIMINARY NOT FOR CONSTRUCTION

REVISIONS NO.	DESCRIPTIONS	DATE	APPROVED

S. CANAL STREET
(STA. 14+00 TO 22+00)
CIVIL IMPROVEMENT PLANS FOR
CANAL STREET AND CHILDS AVENUE
MERCED, CALIFORNIA

NorthStar Engineering Group, Inc.
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620 12th Street Modesto, CA 95354
(209) 524-3525 Phone (209) 524-3526 Fax

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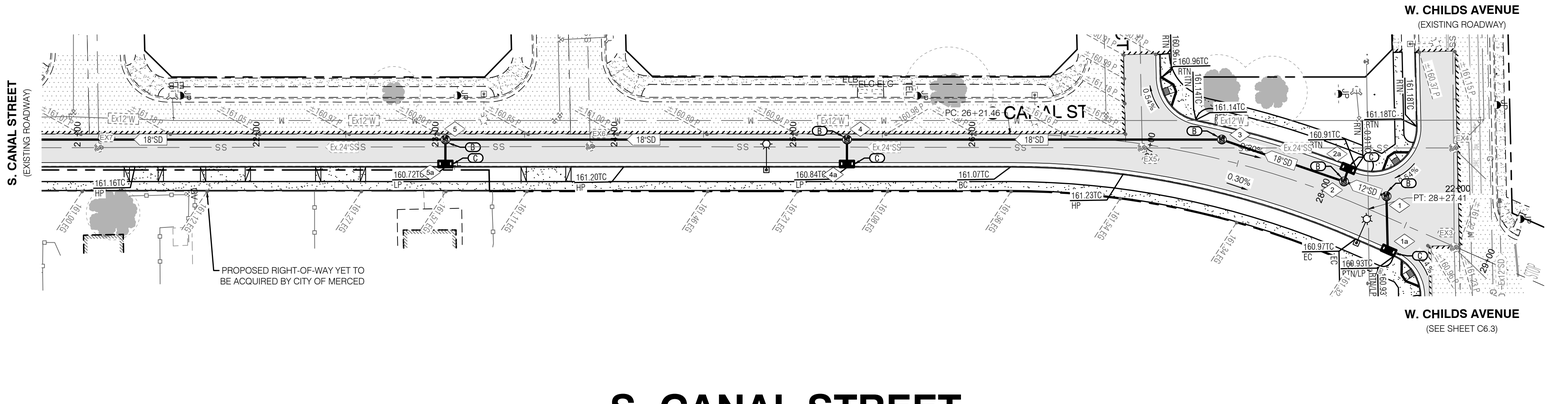
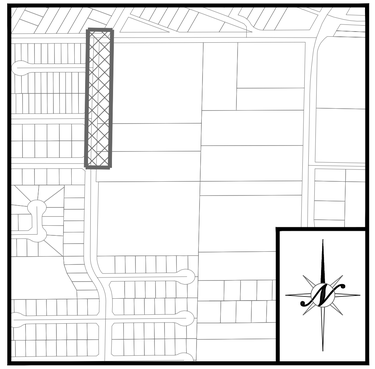
DESIGN:	CVW
CHK'D:	CVW

SHEET NUMBER

C6.1

PLOTTED: 07/01/2025 09:30 PLOTTED BY: Chandreswari
DWGNAME: I:\Work\work\Mar data\23-MS City of Merced Canal St & Childs Ave Project\Civil\Imp Plans\C6.1 & 2 CANAL ST.dwg





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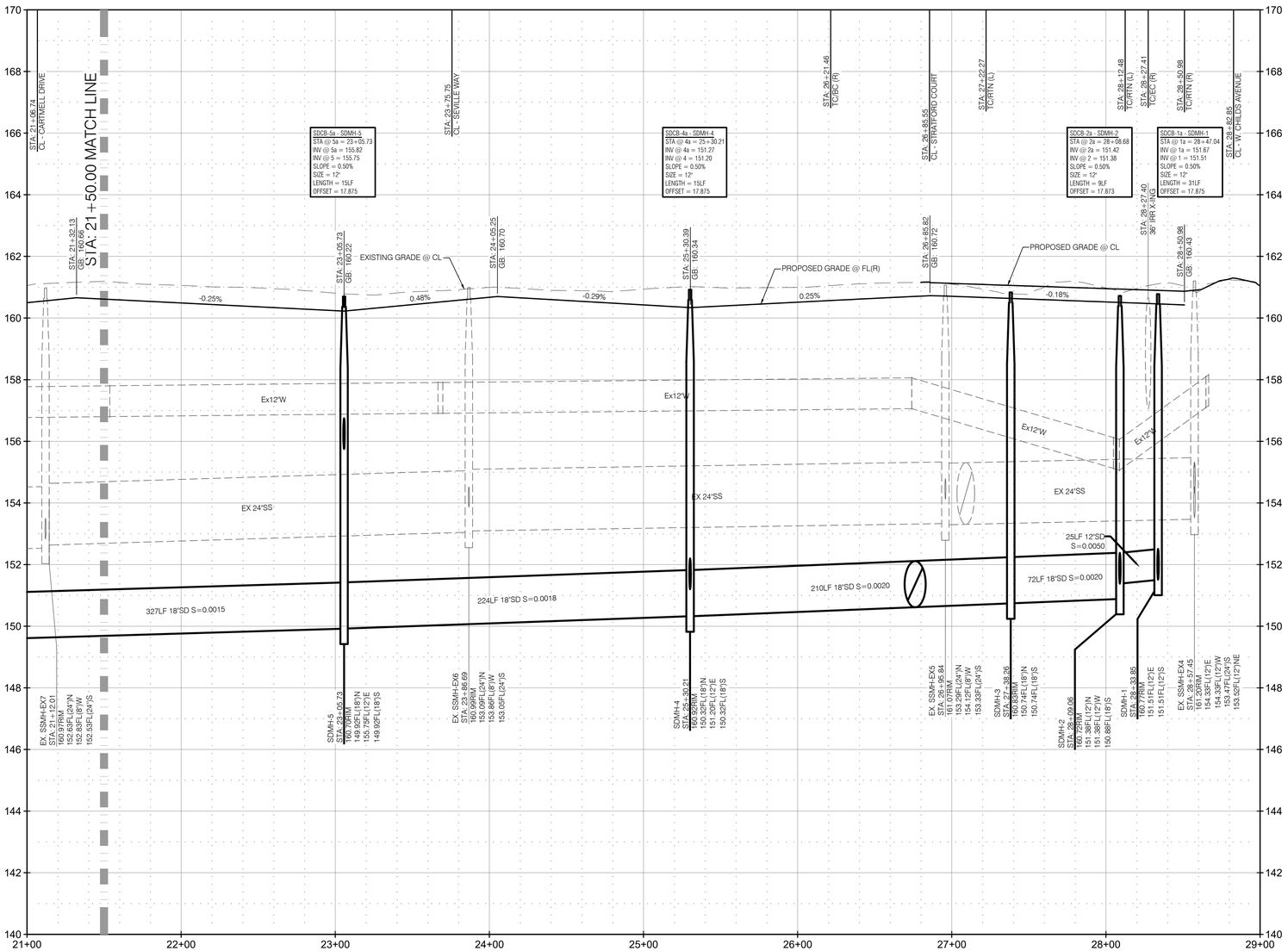

KEY NOTES

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PRELIMINARY PLANS NOT FOR CONSTRUCTION

NO.	DESCRIPTIONS	DATE	APPROVED

REVISIONS

S. CANAL STREET
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SHEET NUMBER

C6.2

PLOTTED: 07/01/2025 09:29 PLOTTED BY: Crystal Iverson
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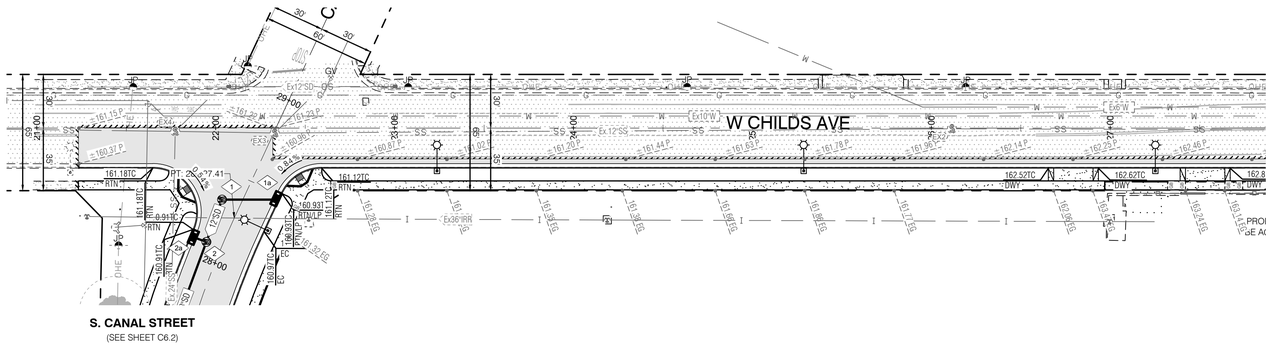
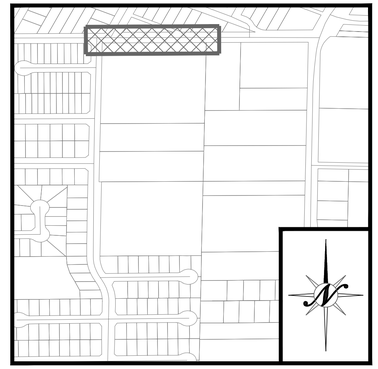
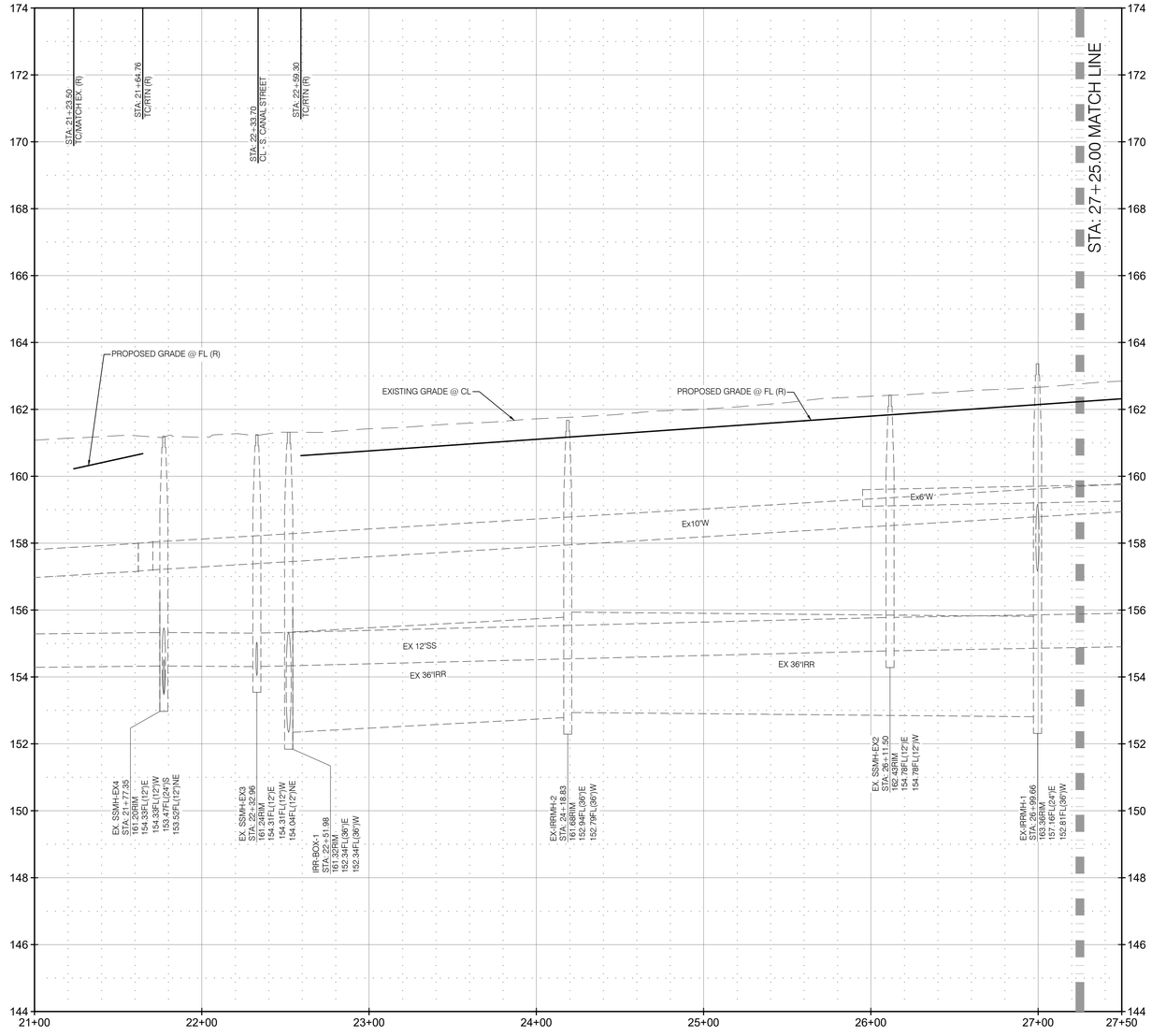




W. CHILDS AVENUE



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REGISTERED PROFESSIONAL ENGINEER CHRISTOPHER WILLIAM TOMS No. 87431 PRELIMINARY NOT FOR CONSTRUCTION STATE OF CALIFORNIA

NO.	DESCRIPTIONS	DATE	APPROVED

REVISIONS

W. CHILDS AVENUE
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CANAL STREET AND CHILDS AVENUE
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SHEET NUMBER

C6.3

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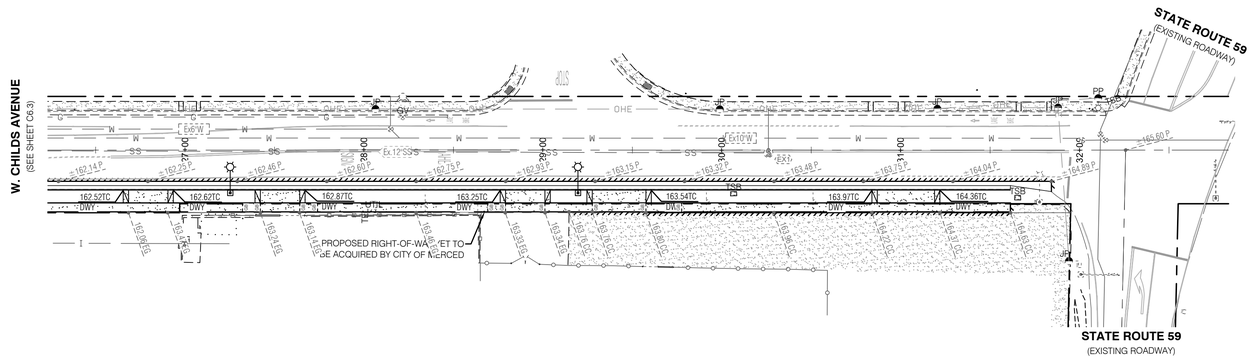
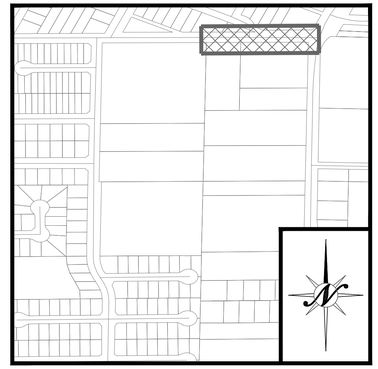
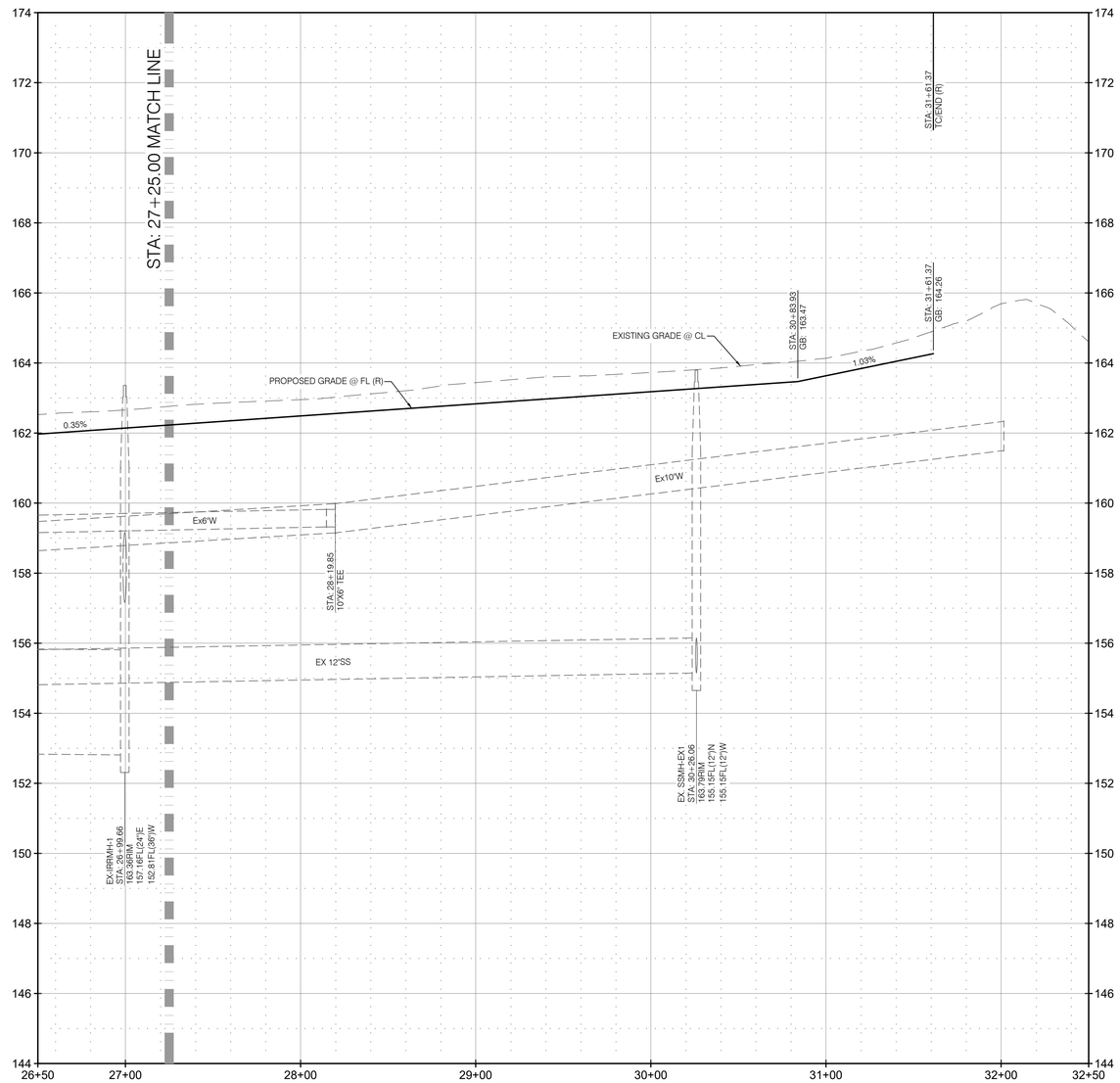




40 20 0 40
1" = 40'

W. CHILDS AVENUE



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REGISTERED PROFESSIONAL ENGINEER CHRISTOPHER V. VIERRA No. 43134 CIVIL STATE OF CALIFORNIA

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REVISIONS NO.	DESCRIPTIONS	DATE	APPROVED

W. CHILDS AVENUE (STA. 26+50 TO 32+50)
CIVIL IMPROVEMENT PLANS FOR
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SHEET NUMBER

C6.4

PLOTTED: 07/01/2025 09:24 PLOTTED BY: Cvandeveen
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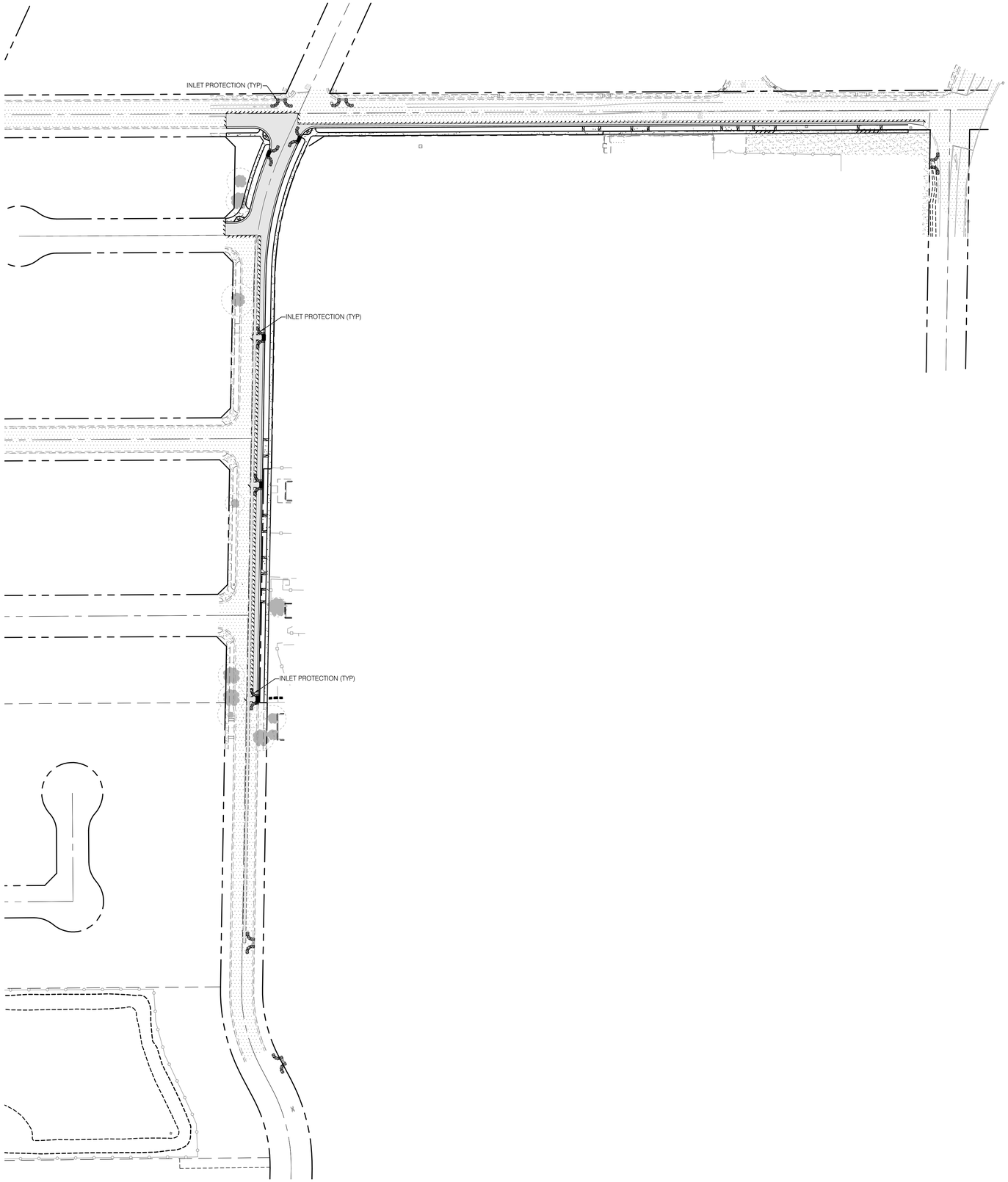

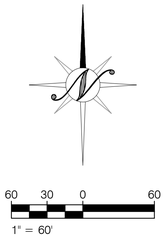

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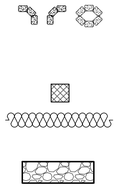

INLET PROTECTION (SEE DETAILS "A", "B", C, AND "D") SHALL BE PLACED AROUND ALL CATCH BASINS WITHIN THE PROJECT DRAINAGE LIMITS, INCLUDING BUT NOT LIMITED TO ALL LANDSCAPE DRAINAGE. ALSO, INLET PROTECTION SHALL BE PLACED AT THE FIRST INLET DOWNSTREAM FROM THE PROJECT SITE (ON EITHER DIRECTION).

CONCRETE WASHOUT AREA (SEE DETAIL "E")

STRAW WATTLE (SEE DETAIL "F") TO BE PLACED AT ALL LOCATIONS SHOWN. STRAW WATTLES SHALL ALSO BE PLACED AT THE FRONT OF ANY LOT WHERE AN UNDERCUT IS NOT PRESENT.

TEMPORARY STABILIZED CONSTRUCTION ENTRANCE (SEE DETAIL "H") TO BE DETERMINED BY CONTRACTOR IN FIELD.

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REGISTERED PROFESSIONAL ENGINEER CHRISTOPHER V. WOOD No. 83418 CIVIL STATE OF CALIFORNIA

PRELIMINARY NOT FOR CONSTRUCTION

REVISIONS

NO.	DESCRIPTIONS	DATE	APPROVED

EROSION CONTROL PLAN

CIVIL IMPROVEMENT PLANS FOR CANAL STREET AND CHILDS AVENUE MERCED, CALIFORNIA

NorthStar Engineering Group, Inc.
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SHEET NUMBER

C7.1

PLOTTED: 06/30/2025 12:31 PLOTTED BY: Tayloen
DWG NAME: F:\23-3406 City of Merced Canal St & Childs Ave Project\Civil\Imp Plans\C7.1 ERC.dwg

EROSION CONTROL NOTES

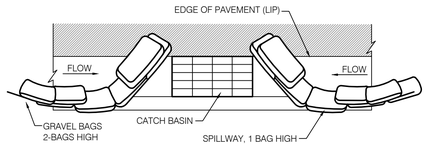
1. THESE PLANS DEPICT APPROPRIATE MEASURES TO CONTROL EROSION ON THE SITE TO BE GRADED AS SHOWN ON THE PLANS THE NATIVE VEGETATION WILL BE REMOVED ONLY FROM THOSE AREAS TO BE GRADED. AREAS OUTSIDE OF AND DOWNSLOPE OF THE LIMITS OF GRADING WILL BE PROTECTED FROM SILT LADEN RUNOFF BY PERIMETER SILT FENCES AS DEPICTED ON THIS PLAN. SLOPED AREAS WHICH HAVE BEEN STRIPPED OF VEGETATION AND NEW SLOPES OVER FOUR FEET HIGH CREATED DURING THE GRADING OPERATION WILL BE TRACKWALKED & HYDROSEEDED.
2. ALL EROSION SEDIMENT STRUCTURES SHALL BE INSPECTED AFTER EACH RAINSTORM AND SHALL BE CLEANED OUT AS NECESSARY.
3. A STABILIZED CONSTRUCTION ENTRANCE SHALL BE INSTALLED PRIOR TO COMMENCEMENT OF GRADING. THE LOCATION SHALL BE DETERMINED IN THE FIELD BY THE CONTRACTOR. ALL CONSTRUCTION TRAFFIC ENTERING THE PAVED ROAD MUST CROSS THE ENTRANCE.
4. THE CONTRACTOR IS RESPONSIBLE FOR ALL ASPECTS OF EROSION CONTROL FOR THE LIFE OF THE PROJECT AND SHALL INSTALL AND MAINTAIN ANY DEVICES AND MEASURES NECESSARY TO THE SATISFACTION OF THE CITY ENGINEER, DURING CONSTRUCTION ACTIVITIES.
5. TO MINIMIZE EROSION OF GRADED BANKS, ALL GRADED BANKS AND STOCKPILE AREAS SHALL BE HYDROSEEDED, LANDSCAPED OR SEALED.
6. STRAW BALES, PIECES OF WOOD, FABRIC OR OTHER SUITABLE MATERIALS SHALL BE USED TO PREVENT SEDIMENT LADEN RUNOFF FROM ENTERING ANY COMPLETED STORM DRAIN INLETS. THESE PROTECTION MEASURES SHALL BE MAINTAINED UNTIL THE PROJECT IS COMPLETED.
7. WHEN TEMPORARY STRUCTURES HAVE SERVED THEIR INTENDED PURPOSE AND THE CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED, THE EMBANKMENT AND RESULTING SEDIMENT DEPOSITS ARE TO BE LEVELED OR OTHERWISE DISPOSED OF BY THE CONTRACTOR AS RECOMMENDED BY THE SOILS ENGINEER.
8. GRADED AREAS MUST DRAIN AWAY FROM THE FACE OF SLOPES AT THE CONCLUSION OF EACH WORKING DAY. DRAINAGE SHALL BE DIRECTED TOWARDS DRAINAGE INLETS.
9. TEMPORARY EROSION CONTROL DEVICES SHOWN ON THIS PLAN WHICH INTERFERE WITH THE WORK SHALL BE RELOCATED OR MODIFIED AS AND WHEN THE INSPECTOR SO DIRECTS AS THE WORK PROGRESSES.
10. ALL LOOSE SOIL AND DEBRIS SHALL BE REMOVED FROM THE STREET AREAS UPON STARTING OPERATIONS AND PERIODICALLY THEREAFTER AS DIRECTED BY THE INSPECTOR.
11. HYDROMULCHING OF SLOPES OVER 5' IN HEIGHT SHALL BE COMPLETED BETWEEN SEPTEMBER 1 AND OCTOBER 1 OF THE YEAR IN WHICH THEY ARE CONSTRUCTED OR IMMEDIATELY AFTER THEIR CONSTRUCTION IF THEY ARE COMPLETED AFTER OCTOBER 1ST. APPLICATION RATES SHALL BE AS FOLLOWS:

HYDROSEED MIX: BOTANICAL NAME	(COMMON NAME)	MIN. % PURITY	MIN. % GERMINATION	LB/ACRE
ARISTIDA TERNIPES VAR. HAMULOSA	(THREE-AWN)	90%	85%	2
BROMUS CARINATUS	(CALIFORNIA BROME)	90%	85%	2
ELYMUS GLAUCUS	(BLUE WILD RYE)	90%	85%	4
ELYMUS TRACHYCAULUS SSP. TRACHYCAULUS	(SLENDER WHEATGRASS)	90%	85%	3
MELICA CALIFORNICA	(CALIFORNIA ONION GRASS)	90%	85%	2
MUHLENBERGIA RIGENS	(DEER GRASS)	90%	85%	4
NASSELLA LEPIDA	(FOOTHILL NEEDLEGRASS)	90%	85%	6
TRIFOLIUM HIRTUM	('HYKON' ROSE CLOVER)	90%	85%	10
CELLULOSE FIBER MULCH				2000
ORGANIC BINDER WITH HYDROSEED SLURRY				50
16-20-0-S FERTILIZER				300

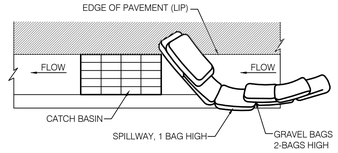
12. WHEN DIRECTED BY THE INSPECTOR, A 12-INCH BERM SHALL BE MAINTAINED ALONG THE TOP OF THE SLOPE OF THOSE FILLS ON WHICH GRADING IS NOT IN PROGRESS.
13. STAND-BY CREWS SHALL BE ALERTED BY THE PERMITTEE OR CONTRACTOR FOR EMERGENCY WORK DURING RAINSTORMS.
14. SEWER OR STORM DRAIN TRENCHES THAT DRAIN THROUGH BASIN DIKES SHALL BE PLUGGED WITH SANDBAGS FROM TOP OF PIPE TO TOP OF DIKE.
15. ALL UTILITY TRENCHES SHALL BE BLOCKED WHEN DIRECTED BY THE DESIGN ENGINEER AT THE PRESCRIBED INTERVALS FROM THE BOTTOM TO TOP WITH DOUBLE ROW OF SANDBAGS PRIOR TO BACKFILL. SANDBAGS ARE TO BE PLACED WITH ALTERNATE HEADER AND STRETCHER COURSES. THE INTERVALS PRESCRIBED BETWEEN SANDBAG BLOCKING SHALL DEPEND ON THE SLOPE OF THE GROUND SURFACE, BUT NOT TO EXCEED THE FOLLOWING:

GRADE OF GROUND SURFACE OR STREET	INTERVAL
LESS THAN 2%	AS REQUIRED
2% TO 4%	100 FEET
4% TO 10%	50 FEET
OVER 10%	25 FEET

16. PROVIDE VELOCITY CHECK DAMS IN ALL UNPAVED STREET AREAS AT THE INTERVALS INDICATED ABOVE. VELOCITY CHECK DAMS MAY BE CONSTRUCTED OF SANDBAGS, TIMBER, OR OTHER EROSION RESISTANT MATERIALS APPROVED BY THE INSPECTOR, AND SHALL EXTEND COMPLETELY ACROSS THE STREET OR CHANNEL AT RIGHT ANGLES TO THE CENTERLINE. EARTH DIKES MAY NOT BE USED AS VELOCITY CHECK DAMS.
17. AFTER SEWER AND UTILITY TRENCHES ARE BACKFILLED AND COMPACTED, THE SURFACES OVER SUCH TRENCHES SHALL BE MOUNDED SLIGHTLY TO PREVENT CHANNELING OF WATER IN THE TRENCH AREA. CARE SHOULD BE EXERCISED TO PROVIDE FOR CROSS-FLOW AT FREQUENT INTERVALS WHERE TRENCHES ARE NOT ON THE CENTERLINE OF A CROWNED STREET. REMOVE ALL CHECK DAMS PRIOR TO BACKFILL.
18. EXCEPT AS OTHERWISE DIRECTED BY THE INSPECTOR, ALL DEVICES SHOWN SHALL BE IN PLACE AT THE END OF EACH WORKING DAY OR WHEN DIRECTED BY THE INSPECTOR.
19. ALL BASINS AND CHECK DAMS SHALL HAVE BEEN PUMPED DRY, AND ALL DEBRIS AND SILT REMOVED WITHIN 24 HOURS AFTER EACH STORM.
20. SANDBAGS SHALL BE STOCKPILED ON-SITE, READY TO BE PLACED IN POSITION WHEN THE CHANCE OF RAIN IS FORECAST TO BE 40% OR GREATER.
21. EXPOSED SLOPES SHALL BE PROTECTED BY VEGETATION COVER OR FABRIC COVER AS APPROVED BY THE CITY ENGINEER.
22. ALL EROSION CONTROL MEASURES SHALL BE IN COMPLIANCE WITH THE LATEST EDITION OF THE CASQA STORMWATER MANAGEMENT HANDBOOK.
23. THE FOLLOWING PLANS ARE ACCURATE FOR EROSION CONTROL PURPOSES ONLY.
24. THE INFORMATION ON THIS PLAN IS INTENDED TO BE USED AS A GUIDELINE FOR THE CONTRACTOR AND SUBCONTRACTORS TO COMPLY WITH THE REQUIREMENTS OF THE STATE WATER RESOURCES CONTROL BOARD. FIELD CONDITIONS MAY NECESSITATE MODIFICATIONS TO THIS PLAN.
25. NO ONSITE FUELING SHALL TAKE PLACE.
26. SEAL OR SKIRT BETWEEN TRAILER & GRADING TO PREVENT EXPOSURE TO DRAIN.
27. STRAW WATTLES INSTALLED ON A SLOPE SHALL CONFORM TO THE GUIDELINES SPECIFIED BY THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM BEST MANAGEMENT PRACTICES.
28. EROSION RESISTANT VEGETATION SHOULD BE MAINTAINED ON THE FACE OF ALL SLOPES.
29. A STATE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) CONSTRUCTION PERMIT NOTICE OF INTENT (NOI) SHALL BE FILED WITH THE STATE WATER RESOURCES CONTROL BOARD.
30. IMPLEMENTATION OF THE RECOMMENDED EROSION CONTROL MEASURES AS SHOWN ON THESE PLANS DOES NOT ENSURE COMPLIANCE WITH FEDERAL, STATE, AND LOCAL LAWS, REGULATIONS, AND ORDINANCES. THE BURDEN OF COMPLIANCE RESTS SOLELY WITH THE OWNER AND DEVELOPER OF THE PROJECT.



A TYPICAL PROTECTION FOR INLET ON SUMP
NTS



B TYPICAL PROTECTION FOR INLET ON GRADE
NTS

NOTES:

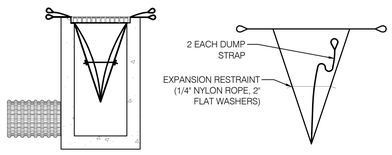
1. INTENDED FOR SHORT-TERM USE.
2. USE TO INHIBIT NON-STORM WATER FLOW.
3. ALLOW FOR PROPER MAINTENANCE AND CLEAN UP.
4. BAGS MUST BE REMOVED AFTER ADJACENT OPERATION IS COMPLETED.
5. NOT APPLICABLE IN AREAS WITH HIGH SILTS AND CLAYS WITHOUT FILTER FABRIC.

DI PROTECTION TYPE 3 - GRAVEL BAG

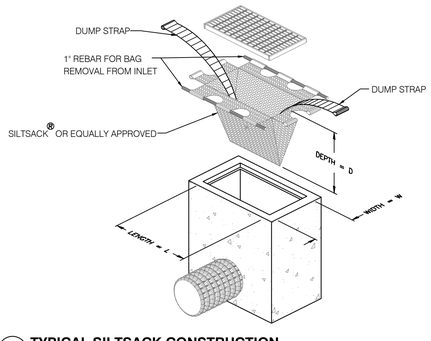
THE GRAVEL BAG BARRIER (TYPE 3) IS SHOWN IN THE FIGURES. FLOW FROM A SEVERE STORM SHOULD NOT OVERTOP THE CURB. IN AREAS OF HIGH CLAY AND SILTS, USE FILTER FABRIC AND GRAVEL AS ADDITIONAL FILTER MEDIA. GRAVEL BAGS SHOULD BE USED DUE TO THEIR HIGH PERMEABILITY.

1. USE SAND BAG MADE OF GEOTEXTILE FABRIC (NOT BURLAP) AND FILL WITH 0.75 IN. ROCK OR 0.25 IN. PEA GRAVEL.
2. CONSTRUCT ON GENTLY SLOPING STREET.
3. LEAVE ROOM UPSTREAM OF BARRIER FOR WATER TO POND AND SEDIMENT TO SETTLE.
4. PLACE SEVERAL LAYERS OF SAND BAGS - OVERLAPPING THE BAGS AND PACKING THEM TIGHTLY TOGETHER.
5. LEAVE GAP OF ONE BAG ON THE TOP ROW TO SERVE AS A SPILLWAY. FLOW FROM A SEVERE STORM (E.G., 10 YEAR STORM) SHOULD NOT OVERTOP THE CURB.
6. THIS DETAIL IS TO BE USED ON EXISTING STREETS WHERE SILTED FLOW IS TO BE INTERCEPTED (CAUGHT) PRIOR TO ENTERING THE STORM DRAIN SYSTEM. SANDBAGS CAN ALSO BE USED WHEN THE ROUGH GRADED STREETS HAVE POURED INPLACE CONCRETE SURROUNDING THE INLET TO CREATE A "FLOW LINE" WHERE A DAM CAN BE ACHIEVED TO PROTECT THE STORM SYSTEM FROM THE INFLOW OF SEDIMENT.

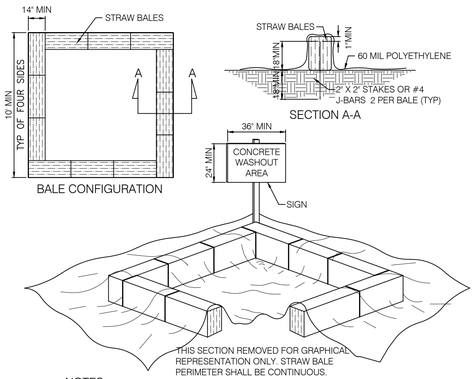
C DI PROTECTION - TYPE 3



INSTALLATION DETAIL **BAG DETAIL**



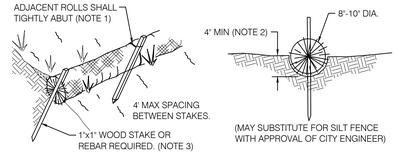
D TYPICAL SILTSACK CONSTRUCTION
NTS



NOTES:

1. FACE SIGN TOWARD NEAREST STREET OR ACCESS POINT.
2. CONCRETE WASHOUT SHALL BE LOCATED BEHIND THE CURB AND 50 FEET MINIMUM FROM DRAINAGE INLETS OR WATERCOURSES.
3. CONTRACTOR SHALL CONDUCT ALL CONCRETE WASHOUT OFF-SITE.

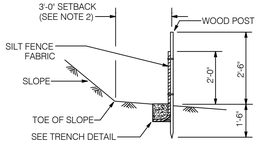
E CONCRETE WASHOUT
NTS



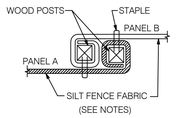
STRAW WATTLE DIKE CONSTRUCTION SPECIFICATIONS:

1. WATTLES SHALL BE PLACED IN A ROW WITH ENDS TIGHTLY ABUTTING.
2. EACH WATTLE SHALL BE EMBEDDED IN THE SOIL A MINIMUM OF 4 INCHES.
3. WATTLES SHALL BE SECURELY ANCHORED IN PLACE BY TWO STAKES OR REBARS DRIVEN THROUGH THE WATTLES. THE FIRST STAKE IN EACH WATTLE SHALL BE DRIVEN TOWARD THE PREVIOUSLY LAID WATTLE TO FORCE THE WATTLES TOGETHER.
4. THE DIKE SHALL BE INSPECTED AFTER EACH STORM, AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED. THE WATTLES SHALL BE REMOVED ONCE THEY HAVE SERVED THEIR PURPOSE SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.

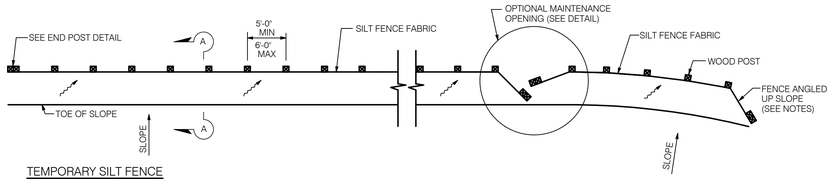
F STRAW WATTLE DETAIL
NTS



G1 SECTION A-A
NTS



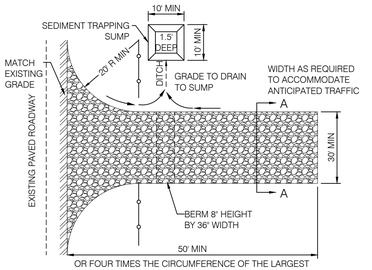
G2 POST AT JOINTS - PLAN
NTS



TEMPORARY SILT FENCE
DESIGN AND CONSTRUCTION SPECIFICATIONS:

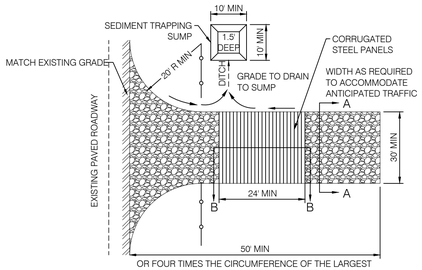
1. THE TEMPORARY SILT FENCE SHALL BE CONSTRUCTED IN STRICT ACCORDANCE WITH THE PLANS AND SPECIFICATIONS OF LATEST EDITION OF THE CALIFORNIA STORMWATER HANDBOOK, DETAIL SE-1. WHERE THERE IS A DISCREPANCY BETWEEN THIS DETAIL AND THE CALIFORNIA STORMWATER HANDBOOK, THE HANDBOOK SHALL GOVERN.
2. THE DOWN STREAM END OF THE TEMPORARY SILT FENCE SHALL HAVE THE LAST 8' ANGLED UP SLOPE.
3. SETBACK DIMENSIONS MAY VARY TO FIT FIELD CONDITIONS.
4. POSTS TO OVERLAP AND FENCE FABRIC TO FOLD AROUND EACH POST ONE FULL TURN. SECURE FABRIC WITH 4 STAPLES FOR EACH POST.
5. POSTS SHALL BE DRIVEN TIGHTLY TOGETHER TO PREVENT POTENTIAL FLOW-THROUGH OF SEDIMENT AT THE JOINT. THE TOPS OF THE POSTS SHALL BE SECURED TO EACH OTHER WITH WIRE.
6. FOR EACH END POST, FENCE FABRIC SHALL BE FOLDED AROUND TWO POSTS ONE FULL TURN AND SECURED WITH 4 STAPLES.
7. MINIMUM OF 4 STAPLES SHALL BE INSTALLED PER POST. DIMENSIONS SHOWN ARE TYPICAL.
8. MAINTENANCE OPENINGS SHALL BE CONSTRUCTED IN A MANNER TO ENSURE THAT SEDIMENT IS RETAINED BY THE TEMPORARY SILT FENCE.
9. JOINT SECTIONS SHALL NOT BE PLACED AT SUMP LOCATIONS.

G5 TEMPORARY SILT FENCE
NTS



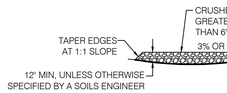
NOTE:
CONSTRUCT SEDIMENT BARRIER AND CHANNELIZE RUNOFF TO SEDIMENT TRAPPING DEVICE

H1 PLAN (OPTION 1)
NTS

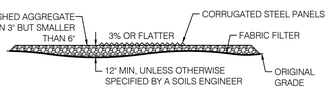


NOTE:
CONSTRUCT SEDIMENT BARRIER AND CHANNELIZE RUNOFF TO SEDIMENT TRAPPING DEVICE

H2 PLAN (OPTION 2)
NTS



SECTION A-A
NTS

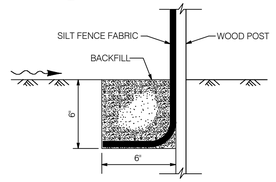


SECTION B-B
NTS

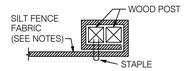
TEMPORARY STABILIZED CONSTRUCTION ENTRANCE
DESIGN AND CONSTRUCTION SPECIFICATIONS:

1. THE TEMPORARY STABILIZED CONSTRUCTION ENTRANCE SHALL BE CONSTRUCTED IN STRICT ACCORDANCE WITH THE PLANS AND SPECIFICATIONS OF LATEST EDITION OF THE CALIFORNIA STORMWATER HANDBOOK, DETAIL TC-1. WHERE THERE IS A DISCREPANCY BETWEEN THIS DETAIL AND THE CALIFORNIA STORMWATER HANDBOOK, THE HANDBOOK SHALL GOVERN.
2. CONTRACTOR SHALL CONSTRUCT A STABILIZED CONSTRUCTION ENTRANCE AT EACH ENTRANCE TO THE PROJECT SITE AND SHALL BE CONSTRUCTED ON LEVEL GROUND.
3. THE MATERIAL FOR CONSTRUCTION OF THE PAD SHALL BE 3 TO 6 INCH DIA. STONE.
4. THE THICKNESS FOR THE PAD SHALL NOT BE LESS THAN 12 INCHES OR AS RECOMMENDED BY SOILS ENGINEER.
5. THE WIDTH OF THE PAD SHALL NOT BE LESS THAN 30' OR THE FULL WIDTH OF ALL POINTS OF INGRESS OR EGRESS, WHICHEVER IS GREATER.
6. THE LENGTH OF THE PAD SHALL BE AS REQUIRED, BUT NOT LESS THAN 50 FEET.
7. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND, AND REPAIR AND/OR CLEAN OUT ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHT-OF-WAY SHALL BE REMOVED IMMEDIATELY.
8. WHEN NECESSARY, WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP, SEDIMENT BASIN, OR SEDIMENT SWALE. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH, OR WATERCOURSE THROUGH USE OF GRAVEL BAGS, GRAVEL, BOARDS, OR OTHER APPROVED METHODS.
9. CONTRACTOR TO REMOVE AND DISPOSE OF STABILIZED CONSTRUCTION ENTRANCE UPON COMPLETION OF CONSTRUCTION.
10. CONSTRUCTION AND MAINTENANCE SHALL BE IN ACCORDANCE WITH THE 2003 CALIFORNIA STORMWATER BMP HANDBOOK.

H3 TEMPORARY STABILIZED CONSTRUCTION ENTRANCE
NTS



G3 TRENCH DETAIL - SECTION
NTS



G4 END POST DETAIL
NTS

REGISTERED PROFESSIONAL ENGINEER
TIMOTHY J. TAYLOR
No. 81431
CIVIL
STATE OF CALIFORNIA

PRELIMINARY - NOT FOR CONSTRUCTION

NO.	DESCRIPTIONS	DATE	APPROVED
	REVISIONS		

EROSION CONTROL PLAN, NOTES AND DETAILS

CIVIL IMPROVEMENT PLANS FOR
CANAL STREET AND CHILDS AVENUE
MERCED, CALIFORNIA

NorthStar Engineering Group, Inc.
• CIVIL ENGINEERING • SURVEYING • PLANNING •
620 12th Street Modesto, CA 95354
(209) 524-3525 Phone (209) 524-3526 Fax

JOB #:	23-3406
DATE:	06/30/2025
SCALE:	AS SHOWN
DRAWN:	TT
DESIGN:	CW
CHKD:	CW

SHEET NUMBER
C7.2

PLOTTED: 06/30/2025 12:31 PLOTTED BY: Tayloen
DWGNAME: F:\23-3406 City of Merced\ Canal St & Childs Ave Project\Drafting Plans\C7.2 EBS.dwg

Preliminary Engineers Estimate
CMAQ Childs Ave & Canal Street

ITEM NO.	ITEM	UNIT OF MEASURE	ESTIMATED QUANTITIES	UNIT PRICE (IN $)	TOTAL (IN $)
1	Permits, Bonds, Licenses, & Insurance	LS	1	$ 20,000.00	$ 20,000.00
2	Public Convenience & Safety	LS	1	$ 42,000.00	$ 42,000.00
3	Water Pollution Control	LS	1	$ 20,000.00	$ 20,000.00
4	Street Sweeping	LS	1	$ 3,500.00	$ 3,500.00
5	Surveying Services	LS	1	$ 8,500.00	$ 8,500.00
6	Monumentation	LS	5	$ 1,200.00	$ 6,000.00
7	Clear & Grubing	LS	1	$ 45,000.00	$ 45,000.00
8	Remove Existing Pavement	SF	21,147	$ 8.00	$ 169,176.00
9	Remove Curb & Gutter	LF	170	$ 25.00	$ 4,250.00
10	Remove Existing Concrete	SF	2,029	$ 4.00	$ 8,116.00
11	Remove Existing Sign	EA	6	$ 300.00	$ 1,800.00
12	Asphalt 5"AC/13"AB	SF	7,400	$ 30.00	$ 222,000.00
13	Asphalt 2.5"AC/6"AB	SF	5,031	$ 20.00	$ 100,620.00
14	Install 5' Sidewalks	SF	10,477	$ 25.00	$ 261,925.00
15	Install Curb & Gutter	LF	2,029	$ 80.00	$ 162,320.00
16	Install Access Ramps	EA	3	$ 8,000.00	$ 24,000.00
17	Construct Driveway (Residential)	EA	4	$ 8,000.00	$ 32,000.00
18	Construct Driveway (Commercial)	EA	5	$ 12,000.00	$ 60,000.00
19	Install Streetlights	EA	8	$ 32,000.00	$ 256,000.00
20	Connect to power	LS	1	$ 25,000.00	$ 25,000.00
21	Install Catch Basins	EA	5	$ 9,000.00	$ 45,000.00
22	Install 18" HDPE Storm Drain	LF	1,204	$ 110.00	$ 132,440.00
23	Install 12" HDPE Storm Drain	LF	110	$ 120.00	$ 13,200.00
24	Raise Utilites to grade	EA	12	$ 1,500.00	$ 18,000.00
25	Remove Tree	EA	2	$ 2,000.00	$ 4,000.00
26	Restoration	LS	1	$ 25,000.00	$ 25,000.00

			Items 1 through 26		**$ 1,709,847.00**
		(15%)	**Contingencies**		**$ 256,477.05**
		(5%)	**Inspection/Testing**		**$ 85,492.35**

		(5%)	**Engineer Administration**		**$ 85,492.35**

		Total			**$ 2,051,816.40**

City of Merced

Pedestrian Facility

CMAQ $ $951,817

LIFE 15 years

Days (D) 365 days/year

Avg. Length (L) of Bike Trip 1 miles 1-dir./trip

Annual Avg. Daily Traffic (ADT) 13,200 trips/day 2-dir. traffic volumes on roadway parrallel to bike project

Adjust. (A) on ADT for auto trips replaced by bike trips 0.0073

Credit (C) for Activity Centers near the bike project 0.003

Annual Auto Trips Reduced
AATR = D x ADT x (A + C) 49,625 trips/year

Annual Auto VMT Reduced
AAVMTR = AATR x L 49,625 miles/year

EMISSION FACTOR INPUTS FOR AUTO TRAVEL: *Table 3: Avg. Auto Emission Factors (Feb. 2024)*

	Bike Lanes: 15-Year Life	AUTO TEF		AUTO VMT	
		Feb., 2024			
ROG		0.461	g/trip	0.051	g/mi
NOx		0.275	g/trip	0.056	g/mi
PM2.5		0.002	g/trip	0.034	g/mi
PM10		0.013	g/trip	0.227	g/mi

Capital Recovery Factor (CRF)
CRF = [(1 + i)^n x (i)] / [(1 + i)^n - 1], where I = 3%
n = 15 LIFE
(1 + i)^n = 1.5580
CRF = 0.0838

Annual Emission Reductions
(ROG + NOx + PM2.5 + PM10) = (AATR x AUTO TEF) + (AAVMT x AUTO VMT) / 454
Note: 1 pound = approx. 454 grams

	ER	Bike Lanes: 15-Year Life		
55.97	ER (ROG)	lbs/year	> kg/day	0.07
36.18	ER (NOx)	lbs/year	> kg/day	0.05
3.94	ER (PM2.5)	lbs/year	> kg/day	0.00
26.23	ER (PM10)	lbs/year	> kg/day	0.03
122.31	**ER-Total**	lbs/year	> kg/day	**0.15**

Cost-Effectiveness of Funding

CEF = (CRF x Funding) / (ROG + NOx + PM2.5)
Cost-Effectiveness of Funding (CEF)
$** 651.85 **$ / lb. emissions

CMAQ: Air Pollution Reductions (kg/day) = (lbs./year) / (2.2 x 365)
0.15 kg/day

Annual Auto VMT Reduced
AAVMTR = AATR x L 49,625 miles/year

Auto Vehicle Emission Factor, AVEF (grams of CO_2e per mile)
411 *EPA*

20,396 kg CO_2e

Merced City School District

444 West 23rd Street, Merced, CA 95340
Phone (209) 385-6600 Fax (209) 385-6393

October 14, 2025

City of Merced
Attn: Joe Cardoso, PLS
378 W. 18th Street
Merced, CA 95340

Dear Mr. Cardoso:

The Merced City School District has reviewed the proposed sidewalk installation on Childs Avenue (from Canal to Martin Luther King Jr. Way) and on Canal Street (from Childs to just south of Cartmell Drive), and we are in full support of the City of Merced's application.

By moving foot traffic in this area off of the main roadway, the proposed sidewalk installation would greatly improve the safety of our students and families traveling on foot or by bicycle to and from Alicia Reyes Elementary School, and the neighboring Tenaya Middle School. With a combined enrollment close to 1,300 students, a vast majority of students living in their boundaries walk to and from school each day. The positive impact of this project on those families would be significant.

If successfully funded, the Merced City School District and the families we serve will be deeply grateful for the ensuing work. The City of Merced's commitment to the safety and well-being of not just our students, but the entire community, is commendable.

If I can be of further assistance with this proposed project, please do not hesitate to contact me at your convenience. Thank you.

Sincerely,

Bryan Behn
Director of Facilities
Merced City School District
bbehn@mcsd.k12.ca.us

MERCED COUNTY ASSOCIATION OF GOVERNMENTS

PH: 209.723.3153
FAX: 209.723.0322
www.mcagov.org
369 W. 18th Street
Merced, CA 95340

April 3, 2024

The Honorable John Duarte
1535 Longworth House Office Building
Washington, DC 20515

Subject: Childs and Canal Roadway Construction Project in South Merced

Dear Congressman Duarte,

The Merced County Association of Governments is writing to express support for the City of Merced's proposed Childs and Canal Roadway Construction Project and urge your consideration of their funding request for $3 million.

The Childs and Canal Roadway Construction Project is a vital initiative to address critical infrastructure needs and foster sustainable development in South Merced, where food insecurity and transportation infrastructure deficiencies persist, exacerbating existing socio-economic disparities. As you may know, South Merced is classified as a food desert, severely limiting residents' access to fresh and nutritious food options. This lack of access underscores the urgency of this project, which aims to improve transportation infrastructure and facilitate the development of a much-needed shopping plaza featuring a grocery store. By providing convenient access to essential dietary staples within the community, this reconstruction project will significantly enhance the quality of life for South Merced residents and mitigate the adverse effects of food insecurity.

The infrastructure improvements included in this project will create safer routes for pedestrians, particularly children and families, to access local parks, schools, and neighborhoods, thus underscoring its commitment to prioritizing the well-being and safety of all residents. Moreover, the Childs and Canal Roadway Construction Project aligns with federal priorities by promoting sustainable growth and addressing environmental concerns, adhering to the City's Sustainable Development Plan and the South Merced Strategic Plan, seeking to create a vibrant and resilient community that caters to the needs of current and future generations.

The project's potential to attract developers, drawn by the prospect of infrastructure improvements and economic opportunities, further highlights its importance in enhancing the community's long-term prospects for success and prosperity. Please consider this project's federal nexus and support the City of Merced's funding request for $3 million. Your assistance will address pressing infrastructure needs and contribute to the long-term prosperity of not only CA-13 but also the state of California as a whole.

If you require any further information or assistance regarding this project, please do not hesitate to contact City Manager Scott McBride.

Sincerely,

DocuSigned by:
Stacie Guzman
F5090DD982C74F3...

Stacie Guzman
Executive Director

MERCED COUNTY ASSOCIATION OF GOVERNMENTS

PH: 209.723.3153
FAX: 209.723.0322
www.mcagov.org
369 W. 18th Street
Merced, CA 95340

March 31, 2025

The Honorable Adam Gray
U.S. House of Representatives
1230 Longworth House Office Building
Washington, DC 20515

Subject: Letter of Support – Childs and Canal Roadway Construction Project

Dear Representative Gray,

On behalf of Merced County Association of Governments, I am writing to express strong support for the City of Merced's federal budget request for the Childs and Canal Roadway Construction Project. This initiative is a critical investment in South Merced, aimed at improving pedestrian safety, enhancing storm drainage, and supporting long-overdue economic revitalization. The project will provide safe access to a much-needed grocery store, addressing food insecurity in an area designated as a food desert.

The City of Merced is seeking $3 million in federal funding to complete the project, which includes reconstructing 2,000 feet of roadway, installing sidewalks, curbs, gutters, streetlights, and pedestrian crossings, as well as improving stormwater infrastructure. These improvements are essential to creating safer routes for families, schoolchildren, and residents who rely on walkable access to local amenities. Moreover, this project aligns with federal priorities for sustainable growth, safety, and economic development.

Beyond infrastructure improvements, the project serves as a catalyst for broader community revitalization. With enhanced accessibility and safety, it paves the way for future development, bringing job opportunities and long-term economic stability to the area. The Childs and Canal Roadway Construction Project is more than a roadway upgrade—it is a necessary step in ensuring South Merced residents have access to essential resources and a higher quality of life.

We urge your support in securing this critical funding and appreciate your consideration of this request. If you require any additional information, please do not hesitate to reach out.

Sincerely,

Stacie Guzman

Stacie Guzman
Executive Director

Project Title: Childs and Canal Roadway Construction Project in South Merced, California

Applicant/Recipient Name:
Scott McBride
City Manager
City of Merced
678 W. 18th Street
Merced, CA 95340

Funding Level Requested: $3 Million

Bill & Account:
Transportation, Housing, and Urban Development
DOT, Transit Infrastructure Projects

Brief Description: The City of Merced's $3 million federal budget request supports the transformative Childs and Canal Roadway Construction Project. This project addresses food insecurity in South Merced by enhancing transportation infrastructure and facilitating the development of a grocery store. This initiative prioritizes safety, aligns with federal priorities for sustainable growth, and promises economic development, ensuring a brighter future for South Merced and its residents.

Detailed Description: The Childs and Canal Roadway Construction Project is a transformative endeavor aimed at boosting transportation infrastructure and combating the prevalent issue of food insecurity within South Merced, a community burdened by its designation as a food desert. Residents in this area face significant challenges in accessing fresh produce, often needing to travel considerable distances—exceeding a mile—to reach a grocery store outside their low-income census tract. This limited access to essential dietary staples exacerbates existing socio-economic inequalities, rendering South Merced more disadvantaged than other parts of Merced.

Central to the project's objectives is reconstructing 2000 feet of roadway, complemented by critical amenities such as curbs, gutters, stormwater systems, sidewalks, access ramps, bike paths, streetlights, and controlled pedestrian street crossings. This comprehensive approach aims to enhance transportation infrastructure and lays the groundwork for developing a much-needed shopping plaza featuring a grocery store. This development addresses the critical food desert issue plaguing South Merced by providing convenient access to fresh and nutritious food options within their community.

The infrastructure improvements promise to establish safer routes for families

and children commuting to and from local parks, elementary schools, and surrounding neighborhoods. Prioritizing the well-being and safety of residents, particularly vulnerable populations such as children and pedestrians, underscores the project's commitment to fostering a secure living environment.

The project's alignment with federal priorities is evident in its focus on promoting sustainable growth and addressing environmental concerns, by adhering to the City's Sustainable Development Plan and the South Merced Strategic Plan, the initiative endeavors to cultivate a vibrant and resilient community that caters to the needs of both current and future generations.

Support from local stakeholders, including community development organizations and residents, underscores the project's significance as a pivotal step toward revitalizing South Merced. Furthermore, the potential for developers to invest in the area, attracted by the prospect of infrastructure improvements and the development of the shopping plaza, holds promise in bringing additional jobs and economic opportunities to the community, thereby augmenting its prospects for long-term success and prosperity.

In essence, the Childs and Canal Roadway Construction Project represents an integrated approach to enhancing transportation infrastructure, promoting economic development, and improving South Merced's overall quality of life. With a budget of $3.5 million, supplemented by $395,768 allocated from Local Transportation Funds (LTF) by the City Council, the project is currently in the design phase, with construction scheduled to commence in the fall of 2024.

Federal Funding Use:

Requested federal funding will play a pivotal role in covering the remaining costs of the Childs and Canal Roadway Construction Project, particularly during the construction phase. These funds will be instrumental in implementing critical infrastructure improvements essential for enhancing accessibility and safety within the community.

Local and Regional Need:

The Childs and Canal Roadway Construction Project is necessary to address pressing local and regional concerns. Beyond mitigating food insecurity and transportation challenges, the project holds the potential to stimulate economic development within South Merced and surrounding areas. By attracting developers to invest in the region, the project can create job opportunities and foster long-term prosperity in alignment with local Sustainable Development and Strategic Plans.

Federal Nexus:

The project strongly aligns with federal infrastructure investment and community development priorities, establishing a clear federal nexus. By addressing critical infrastructure needs and promoting sustainable growth, the

project contributes significantly to the long-term prosperity of CA-13 and California. Therefore, seeking federal funding support is imperative to bridge the financial gap and ensure the successful realization of this transformative initiative, which holds the promise of revitalizing South Merced and enhancing its residents' overall quality of life.

We appreciate your consideration of this funding request. If you have questions or need additional information, please get in touch with City Manager Scott McBride.

Sincerely,

Matthew Serratto
Mayor
City of Merced

CITY OF MERCED

Project Title: Childs and Canal Roadway Construction Project in South Merced, California

Applicant/Recipient Name:
Scott McBride
City Manager
City of Merced
678 W. 18th Street
Merced, CA 95340

Funding Level Requested: $3 Million

Bill & Account:
Transportation, Housing, and Urban Development
DOT, Transit Infrastructure Projects

Brief Description:

Dear Congressman Gray,

I am reaching out regarding the City of Merced's federal budget request for the Childs and Canal Roadway Construction Project, a critical infrastructure initiative focused on improving pedestrian safety, enhancing storm drainage, and supporting economic revitalization in South Merced. This project is essential to providing safe access to a long-awaited grocery store and fostering development in the community. We are seeking $3 million in funding to ensure its successful completion.

Given the urgency and transformative impact of this project, we respectfully request your support in securing the remaining funds and clarifying the status of the previously approved allocation. This initiative directly aligns with federal priorities for sustainable growth, safety, and economic development, and we are eager to move forward in ensuring South Merced residents have access to essential resources, including a long-awaited grocery store.

Detailed Description:

The Childs and Canal Roadway Construction Project is a transformative effort aimed at boosting transportation infrastructure and combating the prevalent issue of food insecurity within South Merced, a community burdened by its designation as a food desert. Residents in this area face significant challenges in accessing fresh produce, often needing to travel considerable distances—exceeding a mile—to reach a grocery store outside their low-income census tract. This limited access to essential dietary staples exacerbates existing socio-economic inequalities, rendering South Merced more disadvantaged than other parts of Merced.

Central to the project's objectives is reconstructing 2000 feet of roadway, complemented by critical amenities such as curbs, gutters, stormwater systems,

sidewalks, access ramps, bike paths, streetlights, and controlled pedestrian street crossings. This comprehensive approach aims to enhance transportation infrastructure and lays the groundwork for developing a much-needed shopping plaza featuring a grocery store. This development addresses the critical food desert issue plaguing South Merced by providing convenient access to fresh and nutritious food options within their community.

The infrastructure improvements promise to establish safer routes for families and children commuting to and from local parks, elementary schools, and surrounding neighborhoods. Prioritizing the well-being and safety of residents, particularly vulnerable populations such as children and pedestrians, underscores the project's commitment to fostering a secure living environment.

The project's alignment with federal priorities is evident in its focus on promoting sustainable growth and addressing environmental concerns, by adhering to the City's Sustainable Development Plan and the South Merced Strategic Plan, the initiative endeavors to cultivate a vibrant and resilient community that caters to the needs of both current and future generations.

Support from local stakeholders, including community development organizations and residents, underscores the project's significance as a pivotal step toward revitalizing South Merced. Furthermore, the potential for developers to invest in the area, attracted by the prospect of infrastructure improvements and the development of the shopping plaza, holds promise in bringing additional jobs and economic opportunities to the community, thereby augmenting its prospects for long-term success and prosperity.

The Childs and Canal Roadway Construction Project is a comprehensive effort to improve transportation infrastructure, drive economic development, and enhance the quality of life in South Merced. The design phase is now complete, and with a total budget of $3.5 million—supplemented by $545,433 in Local Transportation Funds (LTF) allocated by the City Council—construction is ready to begin. However, the project’s start date is contingent on securing the necessary funding.

Federal Funding Use:

Requested federal funding will play a pivotal role in covering the remaining costs of the Childs and Canal Roadway Construction Project, particularly during the construction phase. These funds will be instrumental in implementing critical infrastructure improvements essential for enhancing accessibility and safety within the community.

CITY OF MERCED

Local and Regional Need: The Childs and Canal Roadway Construction Project is necessary to address pressing local and regional concerns. Beyond mitigating food insecurity and transportation challenges, the project holds the potential to stimulate economic development within South Merced and surrounding areas. By attracting developers to invest in the region, the project can create job opportunities and foster long-term prosperity in alignment with local Sustainable Development and Strategic Plans.

Federal Nexus: The project strongly aligns with federal infrastructure investment and community development priorities, establishing a clear federal nexus. By addressing critical infrastructure needs and promoting sustainable growth, the project contributes significantly to the long-term prosperity of CA-13 and California. Therefore, seeking federal funding support is imperative to bridge the financial gap and ensure the successful realization of this transformative initiative, which holds the promise of revitalizing South Merced and enhancing its residents' overall quality of life.

We appreciate your consideration of this funding request. If you have questions or need additional information, please get in touch with City Manager Scott McBride.

Sincerely,

Matthew Serratto
Mayor
City of Merced