

Idaho-Maryland Mine Project
Grass Valley, California

2011 Revised Executive Summary, Introduction and Master
Table of Contents

Section ES

Volume RIA – Application Documents

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MASTER TABLE OF CONTENTS

2011 Revised Project Description, Formal Development Review and Mineral Project Applications and 2007 Revised General Plan Amendment, Prezone and Annexation Applications

<u>SECTION</u>	<u>PAGE NO.</u>
SECTION ES EXECUTIVE SUMMARY AND INTRODUCTION	
ES-1.0 EXECUTIVE SUMMARY	ES-1
ES-1.1 Project Summary	ES-2
ES-1.3 Project Benefits	ES-5
ES-2.0 INTRODUCTION AND SCHEDULE.....	ES-7
FIGURE (Contained in Section ES only)	
ES-1 Idaho- Maryland Conceptual Schedule	
SECTION 1.0 2011 REVISED PROJECT DESCRIPTION	
1.0 REVISED PROJECT DESCRIPTION	1-1
1.1 Introduction.....	1-1
1.2 Background.....	1-1
1.3 Summary of 2011 Project Description Modifications	1-2
1.4 Summary of Project Description Clarifications	1-4
1.5 Project Objectives	1-7
1.6 Project Site Characteristics	1-8
1.6.1 Project Location	1-8
1.6.2 Topographic Features	1-9
1.6.3 Geologic Features	1-9
1.7 Proposed Project Site Developments	1-10
1.7.1 Idaho-Maryland Site	1-11
1.7.2 Round Hole Site.....	1-17
1.7.3 New Brunswick Site	1-18
1.8. Mine Construction	1-20
1.8.1 Idaho-Maryland Site	1-20
1.8.2 Round Hole Site.....	1-25
1.8.3 New Brunswick Site	1-26
1.8.4 Construction Schedule, Workforce, and Traffic	1-27
1.9 Mine Operations	1-32
1.9.1 Mine Throughput by Project Phase.....	1-33
1.9.2 Description of Mining, Processing, and Ancillary Operations	1-35
1.9.3 Operations Schedule. Workforce, and Traffic	1-48

1.10	Reclamation	1-53
1.10.1	Idaho-Maryland Site	1-53
1.10.2	Round Hole and New Brunswick Sites.....	1-55
1.11	References – Project Description.....	1-55

TABLES

R1-Rev2	Project Development by Site and Construction Phase
N1a	Project Property Size and Development Area
R2a-Rev 2	Proposed Building Areas by Construction Phase, Idaho-Maryland Site
R2b-Rev 2	Proposed Building Areas by Construction Phase, Round Hole Site
R2c-Rev 2	Proposed Building Areas by Construction Phase, New Brunswick Site
R3-Rev 2	Land Use and Zoning Summary
R4-Rev2	Estimated Combined Construction and Operation Workforces by Project Phase (Weekdays)
N4a	Project Phases and Estimated Construction Workforce (Weekdays)
N4b	Estimated Permanent Operations Workforce by Project Phase (Weekdays)
R5-Rev2	Idaho-Maryland Site Facilities Proposed for Construction
N6	Heavy-Duty Construction Equipment
N7	Project Phases and Estimate Construction Traffic (Weekdays)
N8	Mine Throughput by Phase
N9	Material Balance for Expected Operation with Recycled Stone
N10	Material Balance for Operational Variability without Recycled Stone
N11	Expected Aggregate Sales by Project Phase
N12a	Chemicals to be used on-Site - Explosives
N12b	Chemicals to be used on-Site - Fuel and Lubricants
N12c	Chemicals to be used on-Site - Gold Process Plant
N13	Estimated Operations Traffic by Project Phase (Weekdays)
N14	Estimate Combined Construction and Operations Traffic (Trucks and Other Vehicles) by Project Phase (Weekdays)
N15	Estimated Combined Construction and Operations Truck Traffic by Project Phase (Weekdays)

PLATES (CONTAINED IN 2007 VOLUME IIA)

(Plates Referenced in Section 1.0 are referenced below)

R1-Rev2	Project Location Map
N1A	Project Location and Mineral Rights Boundary
N1B	Nevada Irrigation District Service Proximate to the New Brunswick Site
R2A-Rev2	Idaho-Maryland Mine Site Plan
R2B-Rev2	Idaho-Maryland Mine Grading Plan
R2C-Rev2	Idaho-Maryland Mine Site Surface Features
N2D	Summary of Historic Mine Residue Sampling, 1989 - Present
R3-Rev2	Round Hole Site Plan
R4-Rev2	New Brunswick Site Plan and Cross Sections
R5-Rev2	Idaho-Maryland Mine Site Internal Traffic Circulation Plan
7A	Tree Survey, Idaho-Maryland Site

PLATES (CONTINUED)

7B	Tree Survey, Round Hole Site
7C	Tree Survey, New Brunswick Site
7D	Tree Survey Buffer Areas for the Idaho-Maryland and New Brunswick Sites
R8A-Rev2	Idaho-Maryland Mine Site Phase 1 Construction
R8B-Rev2	Idaho-Maryland Mine Site Phase 2 Construction
R8C-Rev2	Idaho-Maryland Mine Site Phase 3 Construction
N12M	Elevation of the Idaho-Maryland Site, Building No. 15, Aggregate Crushing Plan
R16-Rev2	Cross-Sections of the Idaho-Maryland Site
R24	Idaho-Maryland Mine Site Reclamation Plan
R25	New Brunswick Site Reclamation Plan
26	Round Hole Site Reclamation Plan

FIGURES (Referenced and contained in Section 1.0)

R1-Rev2	Flow Process Diagram 2400 STPD Combined Ceramics and Gold Recovery Plants
N1A	Aggregate Crushing and Screening Plant Flow Sheet
N2	Flow Process Diagram Gold Plant Electrowinning and Cyanidation Circuit
N3	Summary of Project Phases

APPENDICES (Contained in Section 1.0)

N-S	Domestic Well Level Monitoring Program
N-T	Domestic Well Mitigation Program
N-U	Traffic Management Plan
N-V	Community Communications Plan
N-W	Good Neighbor Plan

APPENDICES (CONTAINED IN 2005 VOLUME III)

(Appendices referenced in Section 1.0 are listed below)

R-B	REVISED TREE SURVEY
B	TREE SURVEY
C	WATER TREATMENT SYSTEM DESCRIPTION
D	EMERGENCY RESPONSE PLAN
E	1995 ENVIRONMENTAL IMPACT REPORT

EXHIBITS (Contained in Section 1.0)

R3-Rev2	Calculations for Run-off Coefficient and 2 year/1 hour and 100 year Storm Events
R4-Rev2	Idaho-Maryland Site Building and Facility Fire Protection Considerations

Section 2.0 2011 REVISED FORMAL DEVELOPMENT REVIEW APPLICATION

2.1	PERMIT APPLICATION REQUIREMENTS	2-1
2.2	REVISED FORMAL DEVELOPMENT REVIEW APPLICATION.....	2-3
A.	Neighborhood Site Plan	2-3
B.	Project Site Plan.....	2-3
C.	Preliminary Grading Plan	2-4
D.	Statistics and Descriptive Information.....	2-4
E.	Architectural Plans.....	2-6
F.	Conceptual Landscape Plans.....	2-6
G.	Cross Sections.....	2-7
H.	Exterior Lighting Plans.....	2-7
I.	Schematic Floor Plans	2-7
J.	Signage	2-7
K.	Color Architectural Drawings/Perspective Drawings.....	2-8
L.	Reduced Site Plans and Architectural Elevations	2-8
M.	Materials Sample Board.....	2-8
N.	Current Preliminary Title Report.....	2-8
O.	Land Use and Zoning Characteristics	2-8
	1. Current Land Use and Zoning	2-8
	2. Proposed Project Land Use and Zoning.....	2-9
P.	Photo Articulations	2-10
Q.	Planned Development Permit Application.....	2-10
	1. Purpose	2-11
	2. Idaho-Maryland Site Features.....	2-11
R.	Annexation Application.....	2-11
S.	Conformance with General Plan.....	2-11

TABLES (Contained in Section 1.0)

R1-Rev2	Project Development by Site and Construction Phase
R3-Rev2	Land Use and Zoning Summary
R5-Rev2	Idaho-Maryland Site Facilities Proposed for Construction

PLATES (CONTAINED IN 2007 VOLUME IIA)

(Plates Referenced in Section 2.0 are referenced below)

R1-Rev2	Project Location Map
R2A-Rev2	Idaho-Maryland Mine Site Plan
R2B-Rev2	Idaho-Maryland Mine Grading Plan
R2C-Rev2	Idaho-Maryland Mine Site Surface Features

R3-Rev2	Round Hole Site Plan
R4-Rev2	New Brunswick Site Plan and Cross Sections
R5-Rev2	Idaho-Maryland Mine Site Internal Traffic Circulation Plan
6	Parcel Site Boundaries
7A	Tree Survey, Idaho-Maryland Site
7B	Tree Survey, Round Hole Site
7C	Tree Survey, New Brunswick Site
7D	Tree Survey Buffer Areas for the Idaho-Maryland and New Brunswick Sites
R7E	Idaho-Maryland Mine Site Detail of Parking and Landscape Areas
R7F	Idaho-Maryland Mine Site Conceptual Landscape Plan (Main Entrance)
N7G	Idaho-Maryland Mine Site Conceptual Landscape Plan (Education Center)
N7H	Idaho-Maryland Mine Site Conceptual Landscape Plan (Idaho-Maryland Shaft Area)
R8A-Rev2	Idaho-Maryland Mine Site Phase 1 Construction
R8B-Rev2	Idaho-Maryland Mine Site Phase 2 Construction
R8C-Rev2	Idaho-Maryland Mine Site Phase 3 Construction
R9A	Artistic Rendering Idaho-Maryland Site from Sierra Nevada Hospital
N9B	Artistic Rendering Idaho-Maryland Site from Spring Hill Drive
R10	Artistic Rendering Idaho-Maryland Site from Centennial Dr. and Whispering Pines Ln.
N11A	Artistic Rendering Idaho-Maryland Site looking northwest from Centennial Drive
N11B	Artistic Rendering Idaho-Maryland Site looking northeast from Centennial Drive
R12A	Elevations of the Idaho-Maryland Site, Building 1, Truck Shop
N12B	Elevations of the Idaho-Maryland Site, Building 2, Core Shed
N12C	Elevations of the Idaho-Maryland Site, Building 3, Equipment Bay
R12D	Elevations of the Idaho-Maryland Site, Building 4, Process Plant and Warehouse
R12E	Elevations of the Idaho-Maryland Site, Building 5, Dry Change House No. 1
R12F	Elevations of the Idaho-Maryland Site, Building 6, Office No. 1
R12G	Elevations of the Idaho-Maryland Site, Building 7, Ceramics Plant
N12H	Elevations of the Idaho-Maryland Site, Building 8, Fuel Oil Storage
R12I	Elevations of the Idaho-Maryland Site, Building 9, Education Center
N12J	Elevations of the Idaho-Maryland Site, Building 10, Dry Change/Office No. 2
N12K	Elevations of the Idaho-Maryland Site, Building 11, Hoist House
N12L	Elevations of the Idaho-Maryland Site, Building 12, Idaho-Maryland Water Treatment Plant
N12M	Elevation of the Idaho-Maryland Site, Building No. 15, Aggregate Crushing Plant
13	Rendering of the Round Hole Site
R14	Artistic Rendering New Brunswick Site Looking Westerly from Brunswick Road
R15	Elevation of the New Brunswick Site, Building No. 13, New Brunswick Hoist House
N15A	Elevation of the New Brunswick Site, Building No. 14, New Brunswick Water Treatment Plant
R16-Rev2	Cross-Sections of the Idaho-Maryland Site
R17	Idaho-Maryland Mine Site Lighting Plan
18	Round Hole Site Lighting Plan
R19	New Brunswick Site Lighting Plan
20	2004 Nevada County Zoning Parcels Within the Sphere of Influence
21	2004 City of Grass Valley Zoning Parcels Within the Sphere of Influence
R22	Site Development Features and City of Grass Valley 2020 Land Use and Zoning Designations
23	Proposed Changes to City of Grass Valley Land Use Designations
R24	Idaho-Maryland Mine Site Reclamation Plan
R25	New Brunswick Site Reclamation Plan
26	Round Hole Site Reclamation Plan

R27A	Photo-Rendering Idaho-Maryland Site from Sierra Nevada Hospital
N27B	Photo-Rendering Idaho-Maryland Site from Spring Hill Drive
N27C	Photo-Rendering Idaho-Maryland Site from Centennial Dr. and Whispering Pines Ln.
N27D	Photo-Rendering Idaho-Maryland Site looking northwest from Centennial Drive
N27E	Photo Rendering Idaho-Maryland Site looking northeast from Centennial Drive
28	Photo-Rendering of the Round Hole Site
29	Photo-Rendering of the New Brunswick Site

FIGURE (Contained in section 2.0 only)

R2-Rev2 Idaho-Maryland Mine Staged Building Construction

APPENDIX (Contained in Section 2.0 only)

N-Q PLANNED DEVELOPMENT APPLICATION

APPENDICES (CONTAINED IN 2005 VOLUME III)
(Appendices referenced in Section 2.0 are listed below)

R-B REVISED TREE SURVEY
B TREE SURVEY
F PRELIMINARY TITLE REPORTS

EXHIBITS (Referenced and contained in Section 2.0 only)

R1 Reduced Architectural Elevations and Perspective Drawings
R2 Reduced Site Plans and Architectural Elevations
N5 Proposed Planned Development Designation for Parcels to be Annexed

Section 3.0 2011 REVISED MINERAL PROJECT APPLICATION

1.0	INTRODUCTION	3-1
2.0	MINERAL EXPLORATION AND/OR EXTRACTION ENVIRONMENTAL ASSESSMENT	3-3
A.	EXISTING CONDITIONS.....	3-3
B.	PROJECT FEATURES	3-5
C.	ENVIRONMENTAL IMPACTS.....	3-15
3.0	RECLAMATION PLAN	3-40
3.1	Idaho-Maryland Mine Reclamation Plan.....	3-47
3.3.1	Mining Operation and Closure	3-47
3.3.2	Geotechnical Requirements	3-51
3.3.3	Hydrology and Water Quality.....	3-52
3.3.4	Environmental Setting and Protection of Fish and Wildlife Habitat	3-55
3.3.5	Resoiling and Revegetation	3-56
3.3.6	Administrative Requirements	3-59
3.3.7	Public Resources Code	3-60

TABLE

(Referenced in Section 3.0 and Contained in Section 1.0)

R3-Rev2 Land Use and Zoning Summary

PLATES (CONTAINED IN 2007 VOLUME IIA)

(Plates referenced in Section 3.0 are listed below)

R1-Rev2	Project Location Map
N1A	Project Location and Mineral Rights Boundary
N1B	Nevada Irrigation District Service Proximate to the New Brunswick Site
R2A-Rev2	Idaho-Maryland Mine Site Plan
R2B-Rev2	Idaho-Maryland Mine Grading Plan
R2C-Rev2	Idaho-Maryland Mine Site Surface Features
N2D	Summary of Historic Mine Residue Sampling, 1989-Present
R3-Rev2	Round Hole Site Plan
R4-Rev2	New Brunswick Site Plan and Cross Sections
R5-Rev2	Idaho-Maryland Mine Site Internal Traffic Circulation Plan
6	Parcel Site Boundaries
7A	Tree Survey, Idaho-Maryland Site
7B	Tree Survey, Round Hole Site
7C	Tree Survey, New Brunswick Site
7D	Tree Survey Buffer Areas for the Idaho-Maryland and New Brunswick Sites
R9A	Artistic Rendering Idaho-Maryland Site from Sierra Nevada Hospital
N9B	Artistic Rendering Idaho-Maryland Site from Spring Hill Drive
R10	Artistic Rendering Idaho-Maryland Site from Centennial Dr. and Whispering Pines Ln.

PLATES CONTINUED (CONTAINED IN 2007 VOLUME IIA)

N11A	Artistic Rendering Idaho-Maryland Site looking northwest from Centennial Drive
N11B	Artistic Rendering Idaho-Maryland Site looking northeast from Centennial Drive
R12A	Elevations of the Idaho-Maryland Site, Building 1, Truck Shop
N12B	Elevations of the Idaho-Maryland Site, Building 2, Core Shed
N12C	Elevations of the Idaho-Maryland Site, Building 3, Equipment Bay
R12D	Elevations of the Idaho-Maryland Site, Building 4, Process Plant and Warehouse
R12E	Elevations of the Idaho-Maryland Site, Building 5, Dry Change House No. 1
R12F	Elevations of the Idaho-Maryland Site, Building 6, Office No. 1
R12G	Elevations of the Idaho-Maryland Site, Building 7, Ceramics Plant
N12H	Elevations of the Idaho-Maryland Site, Building 8, Fuel Oil Storage
R12I	Elevations of the Idaho-Maryland Site, Building 9, Education Center
N12J	Elevations of the Idaho-Maryland Site, Building 10, Dry Change/Office No. 2
N12K	Elevations of the Idaho-Maryland Site, Building 11, Hoist House
N12L	Elevations of the Idaho-Maryland Site, Building 12, Idaho-Maryland Water Treatment Plant
N12M	Elevations of the Idaho-Maryland Site, Building 15, Aggregate Crushing Plant
13	Rendering of the Round Hole Site
R14	Artistic Rendering New Brunswick Site Looking Westerly from Brunswick Road
R15	Elevation of New Brunswick Site, Building 13, Hoist House
N15A	Elevation of the New Brunswick Site, Building 14, Water Treatment System
R16-Rev2	Cross-Sections of the Idaho-Maryland Site
R17	Idaho-Maryland Mine Site Lighting Plan
18	Round Hole Site Lighting Plan
R19	New Brunswick Site Lighting Plan
20	2004 Nevada County Zoning Parcels Within the Sphere of Influence
21	2004 City of Grass Valley Zoning Parcels Within the Sphere of Influence
R22	Site Development Features and City of Grass Valley 2020 Land Use and Zoning Designations
23	Proposed Changes to City of Grass Valley Land Use Designations
R24	Idaho-Maryland Mine Site Reclamation Plan
R25	New Brunswick Site Reclamation Plan
26	Round Hole Site Reclamation Plan

FIGURES

(Figures are contained in Section 1.0)

R1-Rev2	Flow Process Diagram, 2400 STPD Combined Ceramics and Gold Recovery Plants
N1A	Flow Process Diagram, Aggregate Plant
N2	Cyanidation Circuit Flow Diagram
N3	Summary of Project Phases

APPENDIX (Contained in Section 3.0 only)

N-R USE PERMIT APPLICATION

APPENDICES (CONTAINED IN 2005 VOLUME III)

(Appendices referenced in Section 3.0 are listed below and comprise the master list for the permit applications)

A	WETLAND ASSESSMENT
R-B	REVISED TREE SURVEY
B	TREE SURVEY
R-C	REVISED WATER TREATMENT SYSTEM DESCRIPTION
C	WATER TREATMENT SYSTEM DESCRIPTION
D	EMERGENCY RESPONSE PLAN
E	1995 ENVIRONMENTAL IMPACT REPORT
F	PRELIMINARY TITLE REPORTS
G	GEOTECHNICAL REPORT
H	PHASE I ENVIRONMENTAL ASSESSMENTS
I	AIR QUALITY
R-J	REVISED NOISE ANALYSIS
J	NOISE ANALYSIS
K	BIOLOGICAL EVALUATION
L	LIGHTING PLAN
M	SOCIOECONOMIC ANALYSIS
R-N	REVISED TRAFFIC ANALYSIS
N	TRAFFIC ANALYSIS
O	CULTURAL RESOURCES
P	NOTARIZED STATEMENT FROM PROPERTY OWNERS

EXHIBIT

(Referenced in Section 3.0 and Contained in Section 1.0)

R3-Rev2	Calculations for Run-off Coefficient and 2 year/1 hour and 100 year Storm Events
---------	--

Section 4 2007 REVISED GENERAL PLAN AMENDMENT APPLICATION

1.0	PERMIT APPLICATION REQUIREMENTS	4-1
2.0	PURPOSE OF THE PROJECT	4-2
3.0	PROJECT LOCATION	4-3
4.0.	EXHIBITS	4-4
4.1	General Plan Changes	4-4
	A. Idaho-Maryland Site	4-4
4.2	General Plan Map Change	4-6
5.0	GENERAL PLAN CONSISTENCY	4-7
5.1	Mineral Management Element.....	4-7
5.2	Land Use Element.....	4-8
5.3	Conservation and Open Space Element	4-9
5.4	Historical Element	4-9
5.5	Other Master Plans.....	4-9

PLATES (CONTAINED IN 2005 VOLUME II AND 2007 VOLUME IIA)

(Plates referenced in Section 4 are listed below)

R1	Project Location Map
R2A	Idaho-Maryland Site Plan
6	Parcel Site Boundaries
20	2004 Nevada County Zoning Parcels Within the Sphere of Influence
21	2004 City of Grass Valley Zoning Parcels Within the Sphere of Influence
R22	Site Development Features and City of Grass Valley 2020 Land Use and Zoning Designations
23	Proposed Changes to the City of Grass Valley Land Use Designations
R24	Idaho-Maryland Mine Site Reclamation Plan
R25	New Brunswick Site Reclamation Plan
26	Round Hole Site Reclamation Plan

FIGURE

R1	Flow Process Diagram 2400 STPD Combined Ceramics and Gold Recovery Plants
----	---

TABLE

R3	Land Use and Zoning Summary
----	-----------------------------

EXHIBITS

1	Industrial Mineral Resource Zone
R2	Proposed Changes to the City of Grass Valley Land Use Designations and Parcels to the Annexed
N5	Proposed Planned Development Designation for Parcels to be Annexed

Section 5 2007 REVISED REZONE/PREZONE APPLICATION

1.0	PERMIT APPLICATION REQUIREMENTS	5-1
2.0	PURPOSE OF THE PROJECT	5-2
3.0	PROJECT LOCATION	5-3
4.0	EXHIBITS	5-4
	A. Zoning Change Needs.....	5-4
	B. Proposed Zoning	5-4
	C. Reclamation	5-5
	D. Zoning Map Change	5-5
5.0	GENERAL PLAN CONSISTENCY	5-6
6.0	PROJECT PROPERTY LEGAL DESCRIPTIONS	5-8

PLATES (CONTAINED IN 2005 VOLUME II AND 2007 VOLUME IIA)

(Plates referenced in Section 5 are listed below)

R1	Project Location Map
6	Parcel Site Boundaries
20	2004 Nevada County Zoning Parcels Within the Sphere of Influence
21	2004 City of Grass Valley Zoning Parcels Within the Sphere of Influence
R22	Site Development Features and City of Grass Valley 2020 Land Use and Zoning Designations
23	Proposed Changes to the City of Grass Valley Land Use Designations
R24	Idaho-Maryland Mine Site Reclamation Plan
R25	New Brunswick Site Reclamation Plan
26	Round Hole Site Reclamation Plan

FIGURE

R1	Flow Process Diagram 2400 STPD Combined Ceramics and Gold Recovery Plants
----	---

TABLE

R3	Land Use and Zoning Summary
----	-----------------------------

EXHIBITS

1	Industrial Mineral Resources Zone
R2	Proposed Zoning Designations to the City of Grass Valley Zoning Designations and Parcels to be Annexed

APPENDICES (CONTAINED IN 2005 VOLUME III)

(Appendices referenced in Section 5 are listed below)

F	PRELIMINARY TITLE REPORTS
---	---------------------------

Section 6 2007 REVISED ANNEXATION APPLICATION

1.0	PERMIT APPLICATION REQUIREMENTS	6-1
2.0	PROJECT LOCATION	6-2
3.0	LANDOWNERS PETITION.....	6-3
	A. Proposed Municipal Jurisdictional Changes	6-3
	B. Public Services.....	6-3
	C. Reason for the Proposal	6-4
4.0	PLAN SETS.....	6-6
	A. Graphics	6-6
	B. Statistics and Descriptive Information.....	6-6
	1. Current Zoning and Land Use	6-6
	2. Proposed Project Land Use and Zoning.....	6-7
5.0	VICINITY MAP	6-9
6.0	METES AND BOUNDS DESCRIPTION OF SUBJECT PROPERTIES	6-10
7.0	GENERAL PLAN CONSISTENCY STATEMENT	6-11

PLATES (CONTAINED IN 2005 VOLUME II AND 2007 VOLUME IIA)

(Plates referenced in Section 6 are listed below)

R1	Project Location Map
R2A	Idaho-Maryland Site Plan
3	Round Hole Site Plan
R4	New Brunswick Site Plan
6	Parcel Site Boundaries
20	2004 Nevada County Zoning Parcels Within the Sphere of Influence
21	2004 City of Grass Valley Zoning Parcels Within the Sphere of Influence
R22	Site Development Features and City of Grass Valley 2020 Land Use and Zoning Designations
23	Proposed Changes to City of Grass Valley Land Use Designations
R24	Idaho-Maryland Mine Site Reclamation Plan
R25	New Brunswick Site Lighting Plan
26	Round Hole Site Lighting Plan
R27A	Photo-Rendering Idaho-Maryland Site from Sierra Nevada Hospital
N27B	Photo-Rendering Idaho-Maryland Site from Spring Hill Drive
N27C	Photo-Rendering Idaho-Maryland Site from Centennial Dr. and Whispering Pines Ln.
N27D	Photo-Rendering Idaho-Maryland Site looking northwest from Centennial Drive
N27E	Photo Rendering Idaho-Maryland Site looking northeast from Centennial Drive
28	Photo-Rendering of the Round Hole Site
29	Photo-Rendering of the New Brunswick Site

TABLE

R3	Land Use and Zoning Summary
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EXHIBITS

- R1 Proposed Changes to the City of Grass Valley Zoning Designations and Parcels to be Annexed
- R2 Plan Sets and Site Photographs
- 4 Industrial Mineral Resource Zone
- N5 Proposed Planned Development Designation for Parcels to be Annexed

APPENDICES (CONTAINED IN 2005 VOLUME III)

(Appendices referenced in Section 6 are listed below)

- F PRELIMINARY TITLE REPORTS

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ES-1.0 EXECUTIVE SUMMARY

The Idaho-Maryland Mining Corporation (“IMMC”) proposes to reopen the historic Idaho-Maryland Mine located in the City of Grass Valley (“City”) in Nevada County (“County”). The Idaho-Maryland Mine Project (“project”) is an integrated and sustainable mining, processing, manufacturing, and educational/tourism complex incorporating four main project components including:

- 1) Precious metal mining and ore processing to produce gold doré bars;
- 2) Industrial mineral mining and processing to produce aggregate products;
- 3) Recycled and sustainable building products manufacturing to produce green building products such as floor and roof tiles from mineral wastes that would otherwise be deposited in landfills; and
- 4) A Mining Education Center and Outdoor Historical Display Park that will provide education about mining, preserve mining history, preserve mining culture, and promote tourism for the City, County, and the State of California (“State”).

The underlying purpose of the proposed project is to re-open the historical Idaho-Maryland Mine for gold mining, aggregate mining, and recycled stone and ceramic building products manufacturing consistent with all applicable federal, State, and local laws and regulations. More specifically, the project objectives are to:

- 1) Dewater, restore, and develop the historic Idaho-Maryland Mine workings to enable precious metal and industrial mineral resource and reserve exploration and extraction;
- 2) Remove or treat in-place the legacy mine residues from historic mine operations;
- 3) Construct and operate the mine, processing facilities, and all necessary support infrastructure to develop, extract and process the precious and industrial mineral deposits;
- 4) Produce gold doré, specimen gold, recycled stone and ceramic building products, and aggregate materials;
- 5) Reuse and recycle mineral wastes generated by mining operations to manufacture stone and ceramic building products, as well as aggregate, thereby creating marketable building products that would otherwise be land-filled;
- 6) Commercialize a process to recycle mineral wastes, that would otherwise be land-filled, to produce Leadership in Energy and Environmental Design (“LEED”) qualifying recycled building products that are certifiable by the U.S. Green Building Council;
- 7) Develop a Mining Education Center and Outside Historical Mining Display Park to provide opportunities for education, historic preservation, cultural preservation, and tourism for the City, County, and State;
- 8) Operate and maintain these activities for the life of the project, while maintaining flexibility to adapt and adjust to changing economic and market conditions;
- 9) Provide a prudent investment for the applicant/owners, balancing initial startup and long-term costs;
- 10) Provide employment and business opportunities for the local communities throughout the life of the project;
- 11) Reclaim the project at the end of the project life; and

- 12) Provide employment and business opportunities for local communities after the project has been reclaimed by transferring the surface properties and remaining site infrastructure to other approved uses.

The IMMC chose to revise the 2007 Revised Project Description in response to public comments obtained during the review of the project's 2008 Draft Environmental Impact Report ("2008 DEIR"). In addition to the 2011 Revised Project Description ("2011 Revised Project Description") that comprises Section 1.0 of this document set, the following five documents comprise the 2011 Revised Applications for an Exploration and Mining Use Permit for the Idaho-Maryland Mine Project ("2011 Revised Applications"):

- Formal Development Review Application (revised 2011, which includes a Planned Development Application),
- Mineral Project Application (revised 2011, which includes a current Use Permit Application to update that submitted in 2005),
- General Plan Application (revised 2007),
- Rezone/Prezone Application (hereafter "Prezone Application" revised 2007),
- Annexation Application (revised 2007).

As noted above, only two of the five applications required revision to address changes in the Project Description. In addition, the IMMC has prepared five plans to address mine dewatering and traffic mitigation that accompany the 2011 Revised Project Description as Appendices. These plans will be evaluated in the City's resumption of the California Environmental Quality Act ("CEQA") process to address the 2011 Revised Applications and 2008 DEIR public comments. Tables, Figures, and Exhibits contained in the 2011 Project Description are not repeated in the 2011 Revised Formal Development Review and Mineral Project Applications. The other three 2007 applications have not been changed but the revisions to the 2011 Project Description, Formal Development Review and Mineral Project Applications, including changes to Plates, Tables, Figures, Exhibits etc., are included thereto by reference as requested by the City. The background associated with the revision of the 2007 Revised Permit Application documents is contained in Section ES-2.0, Introduction.

ES-1.1 Project Summary

The proposed project contains three properties that are located between 1.5 and 3.5 miles east of downtown Grass Valley (Plate R1-Rev 2). The properties comprise a total of 146 acres of which 43 percent (59 acres) will be developed and include the:

- Idaho-Maryland site (102 acres), of which 59 percent (59.7 acres) will be developed;
- Round Hole site (7 acres), of which 9 percent (0.6 acres) will be developed; and
- New Brunswick site (37 acres), of which 5 percent (1.8 acres) will be developed.

The Idaho-Maryland site comprises the 56 acre property that was formerly known as the WestBet Property and the 45 acre IMMC property that was formerly the Lausman sawmill site. These two properties were a part of the original Idaho-Maryland Mining Company gold processing plant that closed in 1956. In addition, there are approximately 2,800 acres of subsurface mineral lands that constitute the historical area of the Idaho-Maryland Mine. The IMMC seeks to reopen and develop the mine for the purpose of extracting gold and industrial mineral deposits contained therein (Plate N1A).

The Idaho-Maryland site is central to the project and is proposed to be developed for a 3,600 short ton per day (STPD) gold ore and industrial mineral mine. The major buildings proposed to be constructed on the Idaho-Maryland site total approximately 354,890 square feet (“sq ft”, or “ft²”) in building area. Principal mine buildings to be constructed will include a(n):

- gold processing plant
- recycled stone and ceramics plant
- aggregate crushing and screening plant
- Mining Education Center
- truck shop
- core storage building
- warehouse
- water treatment plant
- equipment bay
- bits and steel shop
- mine rescue building
- administrative offices (East)
- dry/change house (West)
- hoist house and head frame
- combined administrative office and dry/change house (East)
- fuel/oil storage

Other facilities, roads, and parking infrastructure will include a(n):

- storm water detention pond
- mine water detention pond
- fire water tank
- employee parking lot (West)
- mine interior parking lot (East)
- Mining Education Center parking lot
- Outdoor Historical Mining Display Park
- truck waiting area
- truck staging area
- truck loading area
- outdoor storage areas (West and East)
- industrial mineral ore and gold ore stockpiles
- aggregate plant feed stockpile
- aggregate plant product stockpiles
- aggregate storage yard
- tile storage yard
- portal area
- electrical substation
- Centennial Drive extension
- Centennial Drive realignment with Spring Hill Drive
- road to Mining Education Center
- interior site roads
- temporary explosives storage area (part of Phase I only)
- raw water line between the New Brunswick and Idaho-Maryland sites

The only proposed structure at the Round Hole site is a 200 sq ft emergency hoist house for ventilation and emergency egress to and from existing mine workings. The hoist house is located at the terminus of an access road and proposed parking area comprising 27,510 sq ft on approximately 7 acres of land.

The facilities proposed to be constructed on the New Brunswick include a headframe, hoist house, substation, compressor house, storage building, and a raw water discharge line between the Idaho-Maryland and New Brunswick sites. The building areas comprise approximately 9,600 sq ft (0.22 acres) on approximately 37 acres of land.

As illustrated in the Idaho-Maryland Mine Project Schedule (Figure ES-1), the construction of the mine, production and operational facilities is planned to be conducted in four phases beginning subsequent to receiving the necessary local, State, and federal permits. The staged surface construction is assumed to occur in Year 1 (for planning purposes) through Year 8, after which full production at the Idaho-Maryland Mine is anticipated. The planned site closure date is Year 23, with one year of mine reclamation in Year 24.

The maximum temporary construction work force estimated for the project is 291 in Year 1 and the maximum permanent operations workforce for the project is estimated to be 500 in Year 7. The peak combined employment is estimated to be 611 in Year 6. At full operations, the total combined personnel for Years 7 to 23 is estimated to be 101 temporary construction personnel and 500 permanent operations personnel, totaling 601 total employees. Approximately 50 percent of these employees are expected to be hired from the local workforce.

ES-1.2 Permit Application Summary

The Formal Development Review Application has been prepared in accordance with the City's checklist to address the surface developments at the three project properties which are described in the Project Summary, above. The Formal Development Review Application has been updated in 2011 to reflect project modifications that have been made to avoid or lessen the project's potential environmental impacts described in the 2008 DEIR.

The Mineral Project Application has been prepared in accordance with the California Surface Mining and Reclamation Act ("SMARA") and CEQA to address the State Department of Conservation's permit application requirements for a mining project. In addition, to those requirements, the 2005 Permit Application included an Expanded Environmental Assessment (2005 Volume I, Section 6) to identify and characterize the environmental baseline characteristics for the project. The 2005 Expanded Environmental Assessment was prepared to conform to the requirements of the CEQA Initial Study Checklist. Answers to technical questions posed in the SMARA and CEQA Checklists were developed using both internal information and external consultant technical reports and other available information that are summarized in the 2005 Volume III, Technical Appendices ("2005 Volume III").

The 2005 Expanded Environmental Assessment has now been superseded by the 2006 Master Environmental Assessment ("2006 MEA") and 2008 DEIR for the project prepared by the City. In addition, the 2007 Revised Project Applications contained revised technical appendices in the Formal Development Review Application and Mineral Project Application (2007 Volume 1A) that have now been integrated into the 2005 Volume III, including the Revised Tree Survey (Appendix R-B), Revised Noise Analysis (Appendix R-J), and Revised Traffic Analysis (Appendix R-N). In addition, Appendix R-C, a 2011 revision of Appendix C, Water Treatment System Description, is contained in the 2005 Volume III. Technical appendices for the 2011 Revised Formal Development Review and Mineral Project Applications are appended to the 2011 Revised Project Description ("2011 Volume RIA").

The purpose of the General Plan Amendment, Rezone/Prezone, and Annexation Applications is to address the jurisdictional responsibilities of the County and the City for the Idaho-Maryland site as well as each site's subsequent zoning designation. The General Plan Amendment and Prezone Applications seek to modify the City's proposed General Plan land use designations to make them consistent with the Mineral Resource Element, the existing and historical uses of the property, and the proposed mining use. Specifically, the IMMC requests that the General Plan be amended to designate all 102 acres of the Idaho-Maryland site as M-I, manufacturing/industrial. The application further proposes that the Idaho-Maryland site be prezoned to M-2/MR, General Industrial, within the Mining Reclamation and Combining Zone. This will make the intended land use and zoning consistent with the City General Plan land use designations and policies. The Annexation Application proposes that the City annex the Idaho-Maryland site that is currently within the County jurisdiction. The annexation will allow the permitting of the Idaho-Maryland site under the single jurisdiction of the City. Modifications to the project description proposed in 2011 do not require revisions to those 2007 applications according to the City.

ES-1.3 Project Benefits

IMMC believes this application is for a project which will bring significant benefit to the City, County, and the State, including:

- Diversification of the local economy through a sustainable mining, processing, manufacturing, and educational/tourism complex that has four separate project components.
- Stable, high wage employment to a variety of skill sets including professional, technical, trades, construction, labor, and other employment categories.
- Substantial and stable local, State and federal tax revenue through increased corporate, income, State and property taxes generated by the project, and its employees.
- Increased local, state, and federal tax revenue resulting from indirect employment that will tier from project employment.
- Increased tax revenue will support local infrastructure projects for the City and County and increase tax revenue can also support increased bonding capacity for needed infrastructure projects.
- Development of three vacant mine properties and clean up of historic mine tailings on the Idaho-Maryland site will have positive impacts to hydrology, biology, water quality, aesthetics and land use for the sites.
- Provision of a local source of high quality aggregate products for road construction, housing construction, and other uses.
- Manufacture of high quality recycled stone and ceramics building products including floor tile, roof tile, wall cladding and potentially other building products. These products are 100% recycled products (except for any surface coatings) that are manufactured from products that would normally end up in landfills. They will qualify for LEED credits and can be certified as green products by groups such as the U.S. Green Building Council.
- Traffic improvements including realignment of Springhill Drive with Centennial Drive and installation of traffic lights.
- Traffic improvements including a connector road between Centennial Drive and East Bennett Road.

- Provision of a Mining Education Center and Outdoor Historical Display Park to be a historical, cultural, and educational facility for Grass Valley, Nevada County, and the State of California. This will preserve the rich mining history and culture of the Grass Valley Mining District (one of the richest gold mining districts in North America), including key people the history of the area including the Coleman Brothers and Errol MacBoyle. This facility will complement other mining related tourist attractions in the area including Empire State Park, the Powerhouse Museum, and the North Star House and will bring future opportunity and employment to the City and County upon closure of the mine.
- The project will support the local community including charities, non-profit groups, sports teams, and other entities through direct contributions and contributions of employees working at the project.
- Part of the Idaho-Maryland Project, including the buildings constructed by the applicant, will be reclaimed for business or commercial use at the end of the project. This will bring future opportunity and employment to the City and County upon closure of the mine.
- Employment generated by the Project will improve the jobs/housing balance with other proposed annexation projects which emphasize residential development, including the nearby Loma Rica Project.
- The project places a smaller demand on City services when compared to planned zoning uses for the sites.

ES-2.0 INTRODUCTION AND SCHEDULE

The IMMC is a wholly-owned subsidiary of the Emgold Mining Corporation (“Emgold”) that is located in the City of Grass Valley (“City”), California. 2011 The Revised Applications were prepared to comply with the applicable federal, State, and local laws and regulations administered by the City to permit the reopening of the historical Idaho-Maryland Mine. These applications are subject to review in accordance with the California Environmental Quality Act (“CEQA”) and the Surface Mining and Reclamation Act (“SMARA”). Upon completion of the CEQA and SMARA processes, the City may consider issuance of a Conditional Use Permit (“CUP”) for the proposed project and approval of each of the IMMC applications to the City.

In April 2005, the IMMC filed five applications and an expanded environmental assessment with technical appendices for the proposed mineral exploration and extraction project; the City accepted these applications as complete in May 2005. Subsequently, these applications were revised and resubmitted to the City in May 2007. IMMC prepared the 2011 Revised Project Description to avoid and abate potential environmental impacts identified in the 2008 DEIR and to incorporate project design improvements based on public input obtained through the CEQA process and IMMC’s public outreach program. To address these modifications, two of the five 2007 Revised Project Application documents and have been updated. The new application document set is contained in “Idaho-Maryland Mine Project 2011 Revised Project Description, Formal Development Review and Mineral Project Applications and 2007 Revised General Plan Amendment, Prezone, and Annexation Applications, Volume RIA - Application Documents, May 2011”.

There are a total of five volumes that comprise the combined 2005, 2007, and 2011 Applications for the Idaho-Maryland Mine Project and are listed below with their current content. The project applications exist on the IMMC website as they ere originally submitted:

- 2005 Volume I – 2005 Applications and Assessment and 2007 Executive Summary, Project Description, Formal Development and Mineral Project Applications
- 2005 Volume II – Plates (graphics that are no longer current)
- 2005 Volume III – 2005, 2007 and 2011 Technical Appendices (technical reports)
- 2007 Volume IIA – Current, New and Revised Plates
- 2011 Volume RIA – 2011 Revised Project Description, Formal Development Review and Mineral Project Applications and 2007 Revised General Plan, Prezone and Annexation Applications (supersedes 2005 Volume I and 2007 Volume IA as they were originally submitted)

The cited application document set contained in 2011 Volume RIA replaces 2007 Volume IA and 2005 Volume I previously submitted to the City with Volumes II (“2005 Volume II”) and IIA (“2007 Volume IIA”), Plates and 2005 Volume III. As that set, the May 2007 Revised Project Application Document Set (“2007 Revised Project Application”) was prepared in accordance with the City requirements. In addition, the Mineral Project Application (Section 3) has been prepared in accordance with SMARA.

The current graphics that support the cited 2011 and 2007 revised applications are contained in the 2007 Volume IIA. The project graphics that are no longer current are contained in the 2005 Volume II and have been labeled “superseded”. The current graphic plates contained in the 2007 Volume IIA are referenced in application text with a single number (e.g., 6) which indicates no changes were necessary since 2005. The plates may also have a prefix “R” for Revised and “N” for New. There are graphics referenced in the 2011 Volume RIA for which revisions have been made to previously unrevised graphic

plates and second revisions or those that were revised in 2007. To keep the nomenclature of such plates, figures, tables, appendices, and exhibit consistent, these items revised in 2011 will bear the prefix “R” and the suffix “Rev 2” so as not to confuse those revised for the first time in 2007 that are labeled with an “R”. New graphic plates, tables, figures, appendices and exhibits developed in 2011 are labeled with an “N” or “N” with an alphabetic suffix (e.g., N2 or N1D). The suffix (e.g., “a” or “A”) has been added if the item is in sequence with a plate, etc., with related subject matter. For instance, a new plate has been added to illustrate surface mine residue sampling on the Idaho-Maryland site and it has been labeled “N2D” to follow R2C-Rev2 which depicts Idaho-Maryland site surface features. If neither a prefix of “R”, “N” nor suffix “Rev2” appears on the figure, table, plate or exhibit, there have been no changes from the 2005 Project Application Document set. For instance, a plate identified as No. “7A” the numeric designation is that for a 2005 plate for which there have been no changes.

The technical reports that were used as a basis for completing the 2005 Project Application Document Set are contained in the 2005 Volume III. Certain technical analyses (e.g., tree survey, traffic and noise analyses) were required to be updated for the 2007 Revised Formal Development Review Application or the CEQA portion of the 2007 Revised Mineral Project Application and were contained in those documents as Appendices. Those technical appendices updated in 2007 have been relocated to the 2005 Volume III with the original analyses. New technical appendices developed to support the 2011 Revised Project Description have been assigned sequenced alphabetic nomenclature to those in the 2005 Volume III and are contained only in the 2011 Revised Project Description.

1.10	Reclamation	1-53
1.10.1	Idaho-Maryland Site	1-53
1.10.2	Round Hole and New Brunswick Sites.....	1-55
1.11	References – Project Description.....	1-55

TABLES

R1-Rev2	Project Development by Site and Construction Phase
N1a	Project Property Size and Development Area
R2a-Rev 2	Proposed Building Areas by Construction Phase, Idaho-Maryland Site
R2b-Rev 2	Proposed Building Areas by Construction Phase, Round Hole Site
R2c-Rev 2	Proposed Building Areas by Construction Phase, New Brunswick Site
R3-Rev 2	Land Use and Zoning Summary
R4-Rev2	Estimated Combined Construction and Operation Workforces by Project Phase (Weekdays)
N4a	Project Phases and Estimated Construction Workforce (Weekdays)
N4b	Estimated Permanent Operations Workforce by Project Phase (Weekdays)
R5-Rev2	Idaho-Maryland Site Facilities Proposed for Construction
N6	Heavy-Duty Construction Equipment
N7	Project Phases and Estimate Construction Traffic (Weekdays)
N8	Mine Throughput by Phase
N9	Material Balance for Expected Operation with Recycled Stone
N10	Material Balance for Operational Variability without Recycled Stone
N11	Expected Aggregate Sales by Project Phase
N12a	Chemicals to be used on-Site - Explosives
N12b	Chemicals to be used on-Site - Fuel and Lubricants
N12c	Chemicals to be used on-Site - Gold Process Plant
N13	Estimated Operations Traffic by Project Phase (Weekdays)
N14	Estimate Combined Construction and Operations Traffic (Trucks and Other Vehicles) by Project Phase (Weekdays)
N15	Estimated Combined Construction and Operations Truck Traffic by Project Phase (Weekdays)

PLATES (CONTAINED IN 2007 VOLUME IIA)

(Plates Referenced in Section 1.0 are referenced below)

R1-Rev2	Project Location Map
N1A	Project Location and Mineral Rights Boundary
N1B	Nevada Irrigation District Service Proximate to the New Brunswick Site
R2A-Rev2	Idaho-Maryland Mine Site Plan
R2B-Rev2	Idaho-Maryland Mine Grading Plan
R2C-Rev2	Idaho-Maryland Mine Site Surface Features
N2D	Summary of Historic Mine Residue Sampling, 1989 - Present
R3-Rev2	Round Hole Site Plan
R4-Rev2	New Brunswick Site Plan and Cross Sections
R5-Rev2	Idaho-Maryland Mine Site Internal Traffic Circulation Plan
7A	Tree Survey, Idaho-Maryland Site

PLATES (CONTINUED)

7B	Tree Survey, Round Hole Site
7C	Tree Survey, New Brunswick Site
7D	Tree Survey Buffer Areas for the Idaho-Maryland and New Brunswick Sites
R8A-Rev2	Idaho-Maryland Mine Site Phase 1 Construction
R8B-Rev2	Idaho-Maryland Mine Site Phase 2 Construction
R8C-Rev2	Idaho-Maryland Mine Site Phase 3 Construction
N12M	Elevation of the Idaho-Maryland Site, Building No. 15, Aggregate Crushing Plan
R16-Rev2	Cross-Sections of the Idaho-Maryland Site
R24	Idaho-Maryland Mine Site Reclamation Plan
R25	New Brunswick Site Reclamation Plan
26	Round Hole Site Reclamation Plan

FIGURES (Referenced and contained in Section 1.0)

R1-Rev2	Flow Process Diagram 2400 STPD Combined Ceramics and Gold Recovery Plants
N1A	Aggregate Crushing and Screening Plant Flow Sheet
N2	Flow Process Diagram Gold Plant Electrowinning and Cyanidation Circuit
N3	Summary of Project Phases

APPENDICES (Contained in Section 1.0)

N-S	Domestic Well Level Monitoring Program
N-T	Domestic Well Mitigation Program
N-U	Traffic Management Plan
N-V	Community Communications Plan
N-W	Good Neighbor Plan

APPENDICES (CONTAINED IN 2005 VOLUME III)

(Appendices referenced in Section 1.0 are listed below)

R-B	REVISED TREE SURVEY
B	TREE SURVEY
C	WATER TREATMENT SYSTEM DESCRIPTION
D	EMERGENCY RESPONSE PLAN
E	1995 ENVIRONMENTAL IMPACT REPORT

EXHIBITS (Contained in Section 1.0)

R3-Rev2	Calculations for Run-off Coefficient and 2 year/1 hour and 100 year Storm Events
R4-Rev2	Idaho-Maryland Site Building and Facility Fire Protection Considerations

Section 2.0 2011 REVISED FORMAL DEVELOPMENT REVIEW APPLICATION

2.1	PERMIT APPLICATION REQUIREMENTS	2-1
2.2	REVISED FORMAL DEVELOPMENT REVIEW APPLICATION.....	2-3
A.	Neighborhood Site Plan	2-3
B.	Project Site Plan.....	2-3
C.	Preliminary Grading Plan	2-4
D.	Statistics and Descriptive Information.....	2-4
E.	Architectural Plans.....	2-6
F.	Conceptual Landscape Plans.....	2-6
G.	Cross Sections.....	2-7
H.	Exterior Lighting Plans.....	2-7
I.	Schematic Floor Plans	2-7
J.	Signage	2-7
K.	Color Architectural Drawings/Perspective Drawings.....	2-8
L.	Reduced Site Plans and Architectural Elevations	2-8
M.	Materials Sample Board.....	2-8
N.	Current Preliminary Title Report.....	2-8
O.	Land Use and Zoning Characteristics	2-8
	1. Current Land Use and Zoning	2-8
	2. Proposed Project Land Use and Zoning.....	2-9
P.	Photo Articulations	2-10
Q.	Planned Development Permit Application.....	2-10
	1. Purpose	2-11
	2. Idaho-Maryland Site Features.....	2-11
R.	Annexation Application.....	2-11
S.	Conformance with General Plan.....	2-11

TABLES (Contained in Section 1.0)

R1-Rev2	Project Development by Site and Construction Phase
R3-Rev2	Land Use and Zoning Summary
R5-Rev2	Idaho-Maryland Site Facilities Proposed for Construction

PLATES (CONTAINED IN 2007 VOLUME IIA)

(Plates Referenced in Section 2.0 are referenced below)

R1-Rev2	Project Location Map
R2A-Rev2	Idaho-Maryland Mine Site Plan
R2B-Rev2	Idaho-Maryland Mine Grading Plan
R2C-Rev2	Idaho-Maryland Mine Site Surface Features

R3-Rev2	Round Hole Site Plan
R4-Rev2	New Brunswick Site Plan and Cross Sections
R5-Rev2	Idaho-Maryland Mine Site Internal Traffic Circulation Plan
6	Parcel Site Boundaries
7A	Tree Survey, Idaho-Maryland Site
7B	Tree Survey, Round Hole Site
7C	Tree Survey, New Brunswick Site
7D	Tree Survey Buffer Areas for the Idaho-Maryland and New Brunswick Sites
R7E	Idaho-Maryland Mine Site Detail of Parking and Landscape Areas
R7F	Idaho-Maryland Mine Site Conceptual Landscape Plan (Main Entrance)
N7G	Idaho-Maryland Mine Site Conceptual Landscape Plan (Education Center)
N7H	Idaho-Maryland Mine Site Conceptual Landscape Plan (Idaho-Maryland Shaft Area)
R8A-Rev2	Idaho-Maryland Mine Site Phase 1 Construction
R8B-Rev2	Idaho-Maryland Mine Site Phase 2 Construction
R8C-Rev2	Idaho-Maryland Mine Site Phase 3 Construction
R9A	Artistic Rendering Idaho-Maryland Site from Sierra Nevada Hospital
N9B	Artistic Rendering Idaho-Maryland Site from Spring Hill Drive
R10	Artistic Rendering Idaho-Maryland Site from Centennial Dr. and Whispering Pines Ln.
N11A	Artistic Rendering Idaho-Maryland Site looking northwest from Centennial Drive
N11B	Artistic Rendering Idaho-Maryland Site looking northeast from Centennial Drive
R12A	Elevations of the Idaho-Maryland Site, Building 1, Truck Shop
N12B	Elevations of the Idaho-Maryland Site, Building 2, Core Shed
N12C	Elevations of the Idaho-Maryland Site, Building 3, Equipment Bay
R12D	Elevations of the Idaho-Maryland Site, Building 4, Process Plant and Warehouse
R12E	Elevations of the Idaho-Maryland Site, Building 5, Dry Change House No. 1
R12F	Elevations of the Idaho-Maryland Site, Building 6, Office No. 1
R12G	Elevations of the Idaho-Maryland Site, Building 7, Ceramics Plant
N12H	Elevations of the Idaho-Maryland Site, Building 8, Fuel Oil Storage
R12I	Elevations of the Idaho-Maryland Site, Building 9, Education Center
N12J	Elevations of the Idaho-Maryland Site, Building 10, Dry Change/Office No. 2
N12K	Elevations of the Idaho-Maryland Site, Building 11, Hoist House
N12L	Elevations of the Idaho-Maryland Site, Building 12, Idaho-Maryland Water Treatment Plant
N12M	Elevation of the Idaho-Maryland Site, Building No. 15, Aggregate Crushing Plant
13	Rendering of the Round Hole Site
R14	Artistic Rendering New Brunswick Site Looking Westerly from Brunswick Road
R15	Elevation of the New Brunswick Site, Building No. 13, New Brunswick Hoist House
N15A	Elevation of the New Brunswick Site, Building No. 14, New Brunswick Water Treatment Plant
R16-Rev2	Cross-Sections of the Idaho-Maryland Site
R17	Idaho-Maryland Mine Site Lighting Plan
18	Round Hole Site Lighting Plan
R19	New Brunswick Site Lighting Plan
20	2004 Nevada County Zoning Parcels Within the Sphere of Influence
21	2004 City of Grass Valley Zoning Parcels Within the Sphere of Influence
R22	Site Development Features and City of Grass Valley 2020 Land Use and Zoning Designations
23	Proposed Changes to City of Grass Valley Land Use Designations
R24	Idaho-Maryland Mine Site Reclamation Plan
R25	New Brunswick Site Reclamation Plan
26	Round Hole Site Reclamation Plan

R27A	Photo-Rendering Idaho-Maryland Site from Sierra Nevada Hospital
N27B	Photo-Rendering Idaho-Maryland Site from Spring Hill Drive
N27C	Photo-Rendering Idaho-Maryland Site from Centennial Dr. and Whispering Pines Ln.
N27D	Photo-Rendering Idaho-Maryland Site looking northwest from Centennial Drive
N27E	Photo Rendering Idaho-Maryland Site looking northeast from Centennial Drive
28	Photo-Rendering of the Round Hole Site
29	Photo-Rendering of the New Brunswick Site

FIGURE (Contained in section 2.0 only)

R2-Rev2 Idaho-Maryland Mine Staged Building Construction

APPENDIX (Contained in Section 2.0 only)

N-Q PLANNED DEVELOPMENT APPLICATION

APPENDICES (CONTAINED IN 2005 VOLUME III)
(Appendices referenced in Section 2.0 are listed below)

R-B REVISED TREE SURVEY
B TREE SURVEY
F PRELIMINARY TITLE REPORTS

EXHIBITS (Referenced and contained in Section 2.0 only)

R1 Reduced Architectural Elevations and Perspective Drawings
R2 Reduced Site Plans and Architectural Elevations
N5 Proposed Planned Development Designation for Parcels to be Annexed

Section 3.0 2011 REVISED MINERAL PROJECT APPLICATION

1.0	INTRODUCTION	3-1
2.0	MINERAL EXPLORATION AND/OR EXTRACTION ENVIRONMENTAL ASSESSMENT	3-3
A.	EXISTING CONDITIONS.....	3-3
B.	PROJECT FEATURES	3-5
C.	ENVIRONMENTAL IMPACTS.....	3-15
3.0	RECLAMATION PLAN	3-40
3.1	Idaho-Maryland Mine Reclamation Plan.....	3-47
3.3.1	Mining Operation and Closure	3-47
3.3.2	Geotechnical Requirements	3-51
3.3.3	Hydrology and Water Quality.....	3-52
3.3.4	Environmental Setting and Protection of Fish and Wildlife Habitat	3-55
3.3.5	Resoiling and Revegetation	3-56
3.3.6	Administrative Requirements	3-59
3.3.7	Public Resources Code	3-60

TABLE

(Referenced in Section 3.0 and Contained in Section 1.0)

R3-Rev2 Land Use and Zoning Summary

PLATES (CONTAINED IN 2007 VOLUME IIA)

(Plates referenced in Section 3.0 are listed below)

R1-Rev2	Project Location Map
N1A	Project Location and Mineral Rights Boundary
N1B	Nevada Irrigation District Service Proximate to the New Brunswick Site
R2A-Rev2	Idaho-Maryland Mine Site Plan
R2B-Rev2	Idaho-Maryland Mine Grading Plan
R2C-Rev2	Idaho-Maryland Mine Site Surface Features
N2D	Summary of Historic Mine Residue Sampling, 1989-Present
R3-Rev2	Round Hole Site Plan
R4-Rev2	New Brunswick Site Plan and Cross Sections
R5-Rev2	Idaho-Maryland Mine Site Internal Traffic Circulation Plan
6	Parcel Site Boundaries
7A	Tree Survey, Idaho-Maryland Site
7B	Tree Survey, Round Hole Site
7C	Tree Survey, New Brunswick Site
7D	Tree Survey Buffer Areas for the Idaho-Maryland and New Brunswick Sites
R9A	Artistic Rendering Idaho-Maryland Site from Sierra Nevada Hospital
N9B	Artistic Rendering Idaho-Maryland Site from Spring Hill Drive
R10	Artistic Rendering Idaho-Maryland Site from Centennial Dr. and Whispering Pines Ln.

PLATES CONTINUED (CONTAINED IN 2007 VOLUME IIA)

N11A	Artistic Rendering Idaho-Maryland Site looking northwest from Centennial Drive
N11B	Artistic Rendering Idaho-Maryland Site looking northeast from Centennial Drive
R12A	Elevations of the Idaho-Maryland Site, Building 1, Truck Shop
N12B	Elevations of the Idaho-Maryland Site, Building 2, Core Shed
N12C	Elevations of the Idaho-Maryland Site, Building 3, Equipment Bay
R12D	Elevations of the Idaho-Maryland Site, Building 4, Process Plant and Warehouse
R12E	Elevations of the Idaho-Maryland Site, Building 5, Dry Change House No. 1
R12F	Elevations of the Idaho-Maryland Site, Building 6, Office No. 1
R12G	Elevations of the Idaho-Maryland Site, Building 7, Ceramics Plant
N12H	Elevations of the Idaho-Maryland Site, Building 8, Fuel Oil Storage
R12I	Elevations of the Idaho-Maryland Site, Building 9, Education Center
N12J	Elevations of the Idaho-Maryland Site, Building 10, Dry Change/Office No. 2
N12K	Elevations of the Idaho-Maryland Site, Building 11, Hoist House
N12L	Elevations of the Idaho-Maryland Site, Building 12, Idaho-Maryland Water Treatment Plant
N12M	Elevations of the Idaho-Maryland Site, Building 15, Aggregate Crushing Plant
13	Rendering of the Round Hole Site
R14	Artistic Rendering New Brunswick Site Looking Westerly from Brunswick Road
R15	Elevation of New Brunswick Site, Building 13, Hoist House
N15A	Elevation of the New Brunswick Site, Building 14, Water Treatment System
R16-Rev2	Cross-Sections of the Idaho-Maryland Site
R17	Idaho-Maryland Mine Site Lighting Plan
18	Round Hole Site Lighting Plan
R19	New Brunswick Site Lighting Plan
20	2004 Nevada County Zoning Parcels Within the Sphere of Influence
21	2004 City of Grass Valley Zoning Parcels Within the Sphere of Influence
R22	Site Development Features and City of Grass Valley 2020 Land Use and Zoning Designations
23	Proposed Changes to City of Grass Valley Land Use Designations
R24	Idaho-Maryland Mine Site Reclamation Plan
R25	New Brunswick Site Reclamation Plan
26	Round Hole Site Reclamation Plan

FIGURES

(Figures are contained in Section 1.0)

R1-Rev2	Flow Process Diagram, 2400 STPD Combined Ceramics and Gold Recovery Plants
N1A	Flow Process Diagram, Aggregate Plant
N2	Cyanidation Circuit Flow Diagram
N3	Summary of Project Phases

APPENDIX (Contained in Section 3.0 only)

N-R USE PERMIT APPLICATION

APPENDICES (CONTAINED IN 2005 VOLUME III)

(Appendices referenced in Section 3.0 are listed below and comprise the master list for the permit applications)

A	WETLAND ASSESSMENT
R-B	REVISED TREE SURVEY
B	TREE SURVEY
R-C	REVISED WATER TREATMENT SYSTEM DESCRIPTION
C	WATER TREATMENT SYSTEM DESCRIPTION
D	EMERGENCY RESPONSE PLAN
E	1995 ENVIRONMENTAL IMPACT REPORT
F	PRELIMINARY TITLE REPORTS
G	GEOTECHNICAL REPORT
H	PHASE I ENVIRONMENTAL ASSESSMENTS
I	AIR QUALITY
R-J	REVISED NOISE ANALYSIS
J	NOISE ANALYSIS
K	BIOLOGICAL EVALUATION
L	LIGHTING PLAN
M	SOCIOECONOMIC ANALYSIS
R-N	REVISED TRAFFIC ANALYSIS
N	TRAFFIC ANALYSIS
O	CULTURAL RESOURCES
P	NOTARIZED STATEMENT FROM PROPERTY OWNERS

EXHIBIT

(Referenced in Section 3.0 and Contained in Section 1.0)

R3-Rev2	Calculations for Run-off Coefficient and 2 year/1 hour and 100 year Storm Events
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Section 4 2007 REVISED GENERAL PLAN AMENDMENT APPLICATION

1.0	PERMIT APPLICATION REQUIREMENTS	4-1
2.0	PURPOSE OF THE PROJECT	4-2
3.0	PROJECT LOCATION	4-3
4.0.	EXHIBITS	4-4
4.1	General Plan Changes	4-4
	A. Idaho-Maryland Site	4-4
4.2	General Plan Map Change	4-6
5.0	GENERAL PLAN CONSISTENCY	4-7
5.1	Mineral Management Element.....	4-7
5.2	Land Use Element.....	4-8
5.3	Conservation and Open Space Element	4-9
5.4	Historical Element	4-9
5.5	Other Master Plans.....	4-9

PLATES (CONTAINED IN 2005 VOLUME II AND 2007 VOLUME IIA)

(Plates referenced in Section 4 are listed below)

R1	Project Location Map
R2A	Idaho-Maryland Site Plan
6	Parcel Site Boundaries
20	2004 Nevada County Zoning Parcels Within the Sphere of Influence
21	2004 City of Grass Valley Zoning Parcels Within the Sphere of Influence
R22	Site Development Features and City of Grass Valley 2020 Land Use and Zoning Designations
23	Proposed Changes to the City of Grass Valley Land Use Designations
R24	Idaho-Maryland Mine Site Reclamation Plan
R25	New Brunswick Site Reclamation Plan
26	Round Hole Site Reclamation Plan

FIGURE

R1	Flow Process Diagram 2400 STPD Combined Ceramics and Gold Recovery Plants
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TABLE

R3	Land Use and Zoning Summary
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EXHIBITS

1	Industrial Mineral Resource Zone
R2	Proposed Changes to the City of Grass Valley Land Use Designations and Parcels to the Annexed
N5	Proposed Planned Development Designation for Parcels to be Annexed

Section 5 2007 REVISED REZONE/PREZONE APPLICATION

1.0	PERMIT APPLICATION REQUIREMENTS	5-1
2.0	PURPOSE OF THE PROJECT	5-2
3.0	PROJECT LOCATION	5-3
4.0	EXHIBITS	5-4
	A. Zoning Change Needs.....	5-4
	B. Proposed Zoning	5-4
	C. Reclamation	5-5
	D. Zoning Map Change	5-5
5.0	GENERAL PLAN CONSISTENCY	5-6
6.0	PROJECT PROPERTY LEGAL DESCRIPTIONS	5-8

PLATES (CONTAINED IN 2005 VOLUME II AND 2007 VOLUME IIA)

(Plates referenced in Section 5 are listed below)

R1	Project Location Map
6	Parcel Site Boundaries
20	2004 Nevada County Zoning Parcels Within the Sphere of Influence
21	2004 City of Grass Valley Zoning Parcels Within the Sphere of Influence
R22	Site Development Features and City of Grass Valley 2020 Land Use and Zoning Designations
23	Proposed Changes to the City of Grass Valley Land Use Designations
R24	Idaho-Maryland Mine Site Reclamation Plan
R25	New Brunswick Site Reclamation Plan
26	Round Hole Site Reclamation Plan

FIGURE

R1	Flow Process Diagram 2400 STPD Combined Ceramics and Gold Recovery Plants
----	---

TABLE

R3	Land Use and Zoning Summary
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EXHIBITS

1	Industrial Mineral Resources Zone
R2	Proposed Zoning Designations to the City of Grass Valley Zoning Designations and Parcels to be Annexed

APPENDICES (CONTAINED IN 2005 VOLUME III)

(Appendices referenced in Section 5 are listed below)

F	PRELIMINARY TITLE REPORTS
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Section 6 2007 REVISED ANNEXATION APPLICATION

1.0	PERMIT APPLICATION REQUIREMENTS	6-1
2.0	PROJECT LOCATION	6-2
3.0	LANDOWNERS PETITION.....	6-3
	A. Proposed Municipal Jurisdictional Changes	6-3
	B. Public Services.....	6-3
	C. Reason for the Proposal	6-4
4.0	PLAN SETS.....	6-6
	A. Graphics	6-6
	B. Statistics and Descriptive Information.....	6-6
	1. Current Zoning and Land Use	6-6
	2. Proposed Project Land Use and Zoning.....	6-7
5.0	VICINITY MAP	6-9
6.0	METES AND BOUNDS DESCRIPTION OF SUBJECT PROPERTIES	6-10
7.0	GENERAL PLAN CONSISTENCY STATEMENT	6-11

PLATES (CONTAINED IN 2005 VOLUME II AND 2007 VOLUME IIA)

(Plates referenced in Section 6 are listed below)

R1	Project Location Map
R2A	Idaho-Maryland Site Plan
3	Round Hole Site Plan
R4	New Brunswick Site Plan
6	Parcel Site Boundaries
20	2004 Nevada County Zoning Parcels Within the Sphere of Influence
21	2004 City of Grass Valley Zoning Parcels Within the Sphere of Influence
R22	Site Development Features and City of Grass Valley 2020 Land Use and Zoning Designations
23	Proposed Changes to City of Grass Valley Land Use Designations
R24	Idaho-Maryland Mine Site Reclamation Plan
R25	New Brunswick Site Lighting Plan
26	Round Hole Site Lighting Plan
R27A	Photo-Rendering Idaho-Maryland Site from Sierra Nevada Hospital
N27B	Photo-Rendering Idaho-Maryland Site from Spring Hill Drive
N27C	Photo-Rendering Idaho-Maryland Site from Centennial Dr. and Whispering Pines Ln.
N27D	Photo-Rendering Idaho-Maryland Site looking northwest from Centennial Drive
N27E	Photo Rendering Idaho-Maryland Site looking northeast from Centennial Drive
28	Photo-Rendering of the Round Hole Site
29	Photo-Rendering of the New Brunswick Site

TABLE

R3	Land Use and Zoning Summary
----	-----------------------------

EXHIBITS

- R1 Proposed Changes to the City of Grass Valley Zoning Designations and Parcels to be Annexed
- R2 Plan Sets and Site Photographs
- 4 Industrial Mineral Resource Zone
- N5 Proposed Planned Development Designation for Parcels to be Annexed

APPENDICES (CONTAINED IN 2005 VOLUME III)

(Appendices referenced in Section 6 are listed below)

- F PRELIMINARY TITLE REPORTS

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ES-1.0 EXECUTIVE SUMMARY

The Idaho-Maryland Mining Corporation (“IMMC”) proposes to reopen the historic Idaho-Maryland Mine located in the City of Grass Valley (“City”) in Nevada County (“County”). The Idaho-Maryland Mine Project (“project”) is an integrated and sustainable mining, processing, manufacturing, and educational/tourism complex incorporating four main project components including:

- 1) Precious metal mining and ore processing to produce gold doré bars;
- 2) Industrial mineral mining and processing to produce aggregate products;
- 3) Recycled and sustainable building products manufacturing to produce green building products such as floor and roof tiles from mineral wastes that would otherwise be deposited in landfills; and
- 4) A Mining Education Center and Outdoor Historical Display Park that will provide education about mining, preserve mining history, preserve mining culture, and promote tourism for the City, County, and the State of California (“State”).

The underlying purpose of the proposed project is to re-open the historical Idaho-Maryland Mine for gold mining, aggregate mining, and recycled stone and ceramic building products manufacturing consistent with all applicable federal, State, and local laws and regulations. More specifically, the project objectives are to:

- 1) Dewater, restore, and develop the historic Idaho-Maryland Mine workings to enable precious metal and industrial mineral resource and reserve exploration and extraction;
- 2) Remove or treat in-place the legacy mine residues from historic mine operations;
- 3) Construct and operate the mine, processing facilities, and all necessary support infrastructure to develop, extract and process the precious and industrial mineral deposits;
- 4) Produce gold doré, specimen gold, recycled stone and ceramic building products, and aggregate materials;
- 5) Reuse and recycle mineral wastes generated by mining operations to manufacture stone and ceramic building products, as well as aggregate, thereby creating marketable building products that would otherwise be land-filled;
- 6) Commercialize a process to recycle mineral wastes, that would otherwise be land-filled, to produce Leadership in Energy and Environmental Design (“LEED”) qualifying recycled building products that are certifiable by the U.S. Green Building Council;
- 7) Develop a Mining Education Center and Outside Historical Mining Display Park to provide opportunities for education, historic preservation, cultural preservation, and tourism for the City, County, and State;
- 8) Operate and maintain these activities for the life of the project, while maintaining flexibility to adapt and adjust to changing economic and market conditions;
- 9) Provide a prudent investment for the applicant/owners, balancing initial startup and long-term costs;
- 10) Provide employment and business opportunities for the local communities throughout the life of the project;
- 11) Reclaim the project at the end of the project life; and

- 12) Provide employment and business opportunities for local communities after the project has been reclaimed by transferring the surface properties and remaining site infrastructure to other approved uses.

The IMMC chose to revise the 2007 Revised Project Description in response to public comments obtained during the review of the project's 2008 Draft Environmental Impact Report ("2008 DEIR"). In addition to the 2011 Revised Project Description ("2011 Revised Project Description") that comprises Section 1.0 of this document set, the following five documents comprise the 2011 Revised Applications for an Exploration and Mining Use Permit for the Idaho-Maryland Mine Project ("2011 Revised Applications"):

- Formal Development Review Application (revised 2011, which includes a Planned Development Application),
- Mineral Project Application (revised 2011, which includes a current Use Permit Application to update that submitted in 2005),
- General Plan Application (revised 2007),
- Rezone/Prezone Application (hereafter "Prezone Application" revised 2007),
- Annexation Application (revised 2007).

As noted above, only two of the five applications required revision to address changes in the Project Description. In addition, the IMMC has prepared five plans to address mine dewatering and traffic mitigation that accompany the 2011 Revised Project Description as Appendices. These plans will be evaluated in the City's resumption of the California Environmental Quality Act ("CEQA") process to address the 2011 Revised Applications and 2008 DEIR public comments. Tables, Figures, and Exhibits contained in the 2011 Project Description are not repeated in the 2011 Revised Formal Development Review and Mineral Project Applications. The other three 2007 applications have not been changed but the revisions to the 2011 Project Description, Formal Development Review and Mineral Project Applications, including changes to Plates, Tables, Figures, Exhibits etc., are included thereto by reference as requested by the City. The background associated with the revision of the 2007 Revised Permit Application documents is contained in Section ES-2.0, Introduction.

ES-1.1 Project Summary

The proposed project contains three properties that are located between 1.5 and 3.5 miles east of downtown Grass Valley (Plate R1-Rev 2). The properties comprise a total of 146 acres of which 43 percent (59 acres) will be developed and include the:

- Idaho-Maryland site (102 acres), of which 59 percent (59.7 acres) will be developed;
- Round Hole site (7 acres), of which 9 percent (0.6 acres) will be developed; and
- New Brunswick site (37 acres), of which 5 percent (1.8 acres) will be developed.

The Idaho-Maryland site comprises the 56 acre property that was formerly known as the WestBet Property and the 45 acre IMMC property that was formerly the Lausman sawmill site. These two properties were a part of the original Idaho-Maryland Mining Company gold processing plant that closed in 1956. In addition, there are approximately 2,800 acres of subsurface mineral lands that constitute the historical area of the Idaho-Maryland Mine. The IMMC seeks to reopen and develop the mine for the purpose of extracting gold and industrial mineral deposits contained therein (Plate N1A).

The Idaho-Maryland site is central to the project and is proposed to be developed for a 3,600 short ton per day (STPD) gold ore and industrial mineral mine. The major buildings proposed to be constructed on the Idaho-Maryland site total approximately 354,890 square feet (“sq ft”, or “ft²”) in building area. Principal mine buildings to be constructed will include a(n):

- gold processing plant
- recycled stone and ceramics plant
- aggregate crushing and screening plant
- Mining Education Center
- truck shop
- core storage building
- warehouse
- water treatment plant
- equipment bay
- bits and steel shop
- mine rescue building
- administrative offices (East)
- dry/change house (West)
- hoist house and head frame
- combined administrative office and dry/change house (East)
- fuel/oil storage

Other facilities, roads, and parking infrastructure will include a(n):

- storm water detention pond
- mine water detention pond
- fire water tank
- employee parking lot (West)
- mine interior parking lot (East)
- Mining Education Center parking lot
- Outdoor Historical Mining Display Park
- truck waiting area
- truck staging area
- truck loading area
- outdoor storage areas (West and East)
- industrial mineral ore and gold ore stockpiles
- aggregate plant feed stockpile
- aggregate plant product stockpiles
- aggregate storage yard
- tile storage yard
- portal area
- electrical substation
- Centennial Drive extension
- Centennial Drive realignment with Spring Hill Drive
- road to Mining Education Center
- interior site roads
- temporary explosives storage area (part of Phase I only)
- raw water line between the New Brunswick and Idaho-Maryland sites

The only proposed structure at the Round Hole site is a 200 sq ft emergency hoist house for ventilation and emergency egress to and from existing mine workings. The hoist house is located at the terminus of an access road and proposed parking area comprising 27,510 sq ft on approximately 7 acres of land.

The facilities proposed to be constructed on the New Brunswick include a headframe, hoist house, substation, compressor house, storage building, and a raw water discharge line between the Idaho-Maryland and New Brunswick sites. The building areas comprise approximately 9,600 sq ft (0.22 acres) on approximately 37 acres of land.

As illustrated in the Idaho-Maryland Mine Project Schedule (Figure ES-1), the construction of the mine, production and operational facilities is planned to be conducted in four phases beginning subsequent to receiving the necessary local, State, and federal permits. The staged surface construction is assumed to occur in Year 1 (for planning purposes) through Year 8, after which full production at the Idaho-Maryland Mine is anticipated. The planned site closure date is Year 23, with one year of mine reclamation in Year 24.

The maximum temporary construction work force estimated for the project is 291 in Year 1 and the maximum permanent operations workforce for the project is estimated to be 500 in Year 7. The peak combined employment is estimated to be 611 in Year 6. At full operations, the total combined personnel for Years 7 to 23 is estimated to be 101 temporary construction personnel and 500 permanent operations personnel, totaling 601 total employees. Approximately 50 percent of these employees are expected to be hired from the local workforce.

ES-1.2 Permit Application Summary

The Formal Development Review Application has been prepared in accordance with the City's checklist to address the surface developments at the three project properties which are described in the Project Summary, above. The Formal Development Review Application has been updated in 2011 to reflect project modifications that have been made to avoid or lessen the project's potential environmental impacts described in the 2008 DEIR.

The Mineral Project Application has been prepared in accordance with the California Surface Mining and Reclamation Act ("SMARA") and CEQA to address the State Department of Conservation's permit application requirements for a mining project. In addition, to those requirements, the 2005 Permit Application included an Expanded Environmental Assessment (2005 Volume I, Section 6) to identify and characterize the environmental baseline characteristics for the project. The 2005 Expanded Environmental Assessment was prepared to conform to the requirements of the CEQA Initial Study Checklist. Answers to technical questions posed in the SMARA and CEQA Checklists were developed using both internal information and external consultant technical reports and other available information that are summarized in the 2005 Volume III, Technical Appendices ("2005 Volume III").

The 2005 Expanded Environmental Assessment has now been superseded by the 2006 Master Environmental Assessment ("2006 MEA") and 2008 DEIR for the project prepared by the City. In addition, the 2007 Revised Project Applications contained revised technical appendices in the Formal Development Review Application and Mineral Project Application (2007 Volume 1A) that have now been integrated into the 2005 Volume III, including the Revised Tree Survey (Appendix R-B), Revised Noise Analysis (Appendix R-J), and Revised Traffic Analysis (Appendix R-N). In addition, Appendix R-C, a 2011 revision of Appendix C, Water Treatment System Description, is contained in the 2005 Volume III. Technical appendices for the 2011 Revised Formal Development Review and Mineral Project Applications are appended to the 2011 Revised Project Description ("2011 Volume RIA").

The purpose of the General Plan Amendment, Rezone/Prezone, and Annexation Applications is to address the jurisdictional responsibilities of the County and the City for the Idaho-Maryland site as well as each site's subsequent zoning designation. The General Plan Amendment and Prezone Applications seek to modify the City's proposed General Plan land use designations to make them consistent with the Mineral Resource Element, the existing and historical uses of the property, and the proposed mining use. Specifically, the IMMC requests that the General Plan be amended to designate all 102 acres of the Idaho-Maryland site as M-I, manufacturing/industrial. The application further proposes that the Idaho-Maryland site be rezoned to M-2/MR, General Industrial, within the Mining Reclamation and Combining Zone. This will make the intended land use and zoning consistent with the City General Plan land use designations and policies. The Annexation Application proposes that the City annex the Idaho-Maryland site that is currently within the County jurisdiction. The annexation will allow the permitting of the Idaho-Maryland site under the single jurisdiction of the City. Modifications to the project description proposed in 2011 do not require revisions to those 2007 applications according to the City.

ES-1.3 Project Benefits

IMMC believes this application is for a project which will bring significant benefit to the City, County, and the State, including:

- Diversification of the local economy through a sustainable mining, processing, manufacturing, and educational/tourism complex that has four separate project components.
- Stable, high wage employment to a variety of skill sets including professional, technical, trades, construction, labor, and other employment categories.
- Substantial and stable local, State and federal tax revenue through increased corporate, income, State and property taxes generated by the project, and its employees.
- Increased local, state, and federal tax revenue resulting from indirect employment that will tier from project employment.
- Increased tax revenue will support local infrastructure projects for the City and County and increase tax revenue can also support increased bonding capacity for needed infrastructure projects.
- Development of three vacant mine properties and clean up of historic mine tailings on the Idaho-Maryland site will have positive impacts to hydrology, biology, water quality, aesthetics and land use for the sites.
- Provision of a local source of high quality aggregate products for road construction, housing construction, and other uses.
- Manufacture of high quality recycled stone and ceramics building products including floor tile, roof tile, wall cladding and potentially other building products. These products are 100% recycled products (except for any surface coatings) that are manufactured from products that would normally end up in landfills. They will qualify for LEED credits and can be certified as green products by groups such as the U.S. Green Building Council.
- Traffic improvements including realignment of Springhill Drive with Centennial Drive and installation of traffic lights.
- Traffic improvements including a connector road between Centennial Drive and East Bennett Road.

- Provision of a Mining Education Center and Outdoor Historical Display Park to be a historical, cultural, and educational facility for Grass Valley, Nevada County, and the State of California. This will preserve the rich mining history and culture of the Grass Valley Mining District (one of the richest gold mining districts in North America), including key people the history of the area including the Coleman Brothers and Errol MacBoyle. This facility will complement other mining related tourist attractions in the area including Empire State Park, the Powerhouse Museum, and the North Star House and will bring future opportunity and employment to the City and County upon closure of the mine.
- The project will support the local community including charities, non-profit groups, sports teams, and other entities through direct contributions and contributions of employees working at the project.
- Part of the Idaho-Maryland Project, including the buildings constructed by the applicant, will be reclaimed for business or commercial use at the end of the project. This will bring future opportunity and employment to the City and County upon closure of the mine.
- Employment generated by the Project will improve the jobs/housing balance with other proposed annexation projects which emphasize residential development, including the nearby Loma Rica Project.
- The project places a smaller demand on City services when compared to planned zoning uses for the sites.

ES-2.0 INTRODUCTION AND SCHEDULE

The IMMC is a wholly-owned subsidiary of the Emgold Mining Corporation (“Emgold”) that is located in the City of Grass Valley (“City”), California. 2011 The Revised Applications were prepared to comply with the applicable federal, State, and local laws and regulations administered by the City to permit the reopening of the historical Idaho-Maryland Mine. These applications are subject to review in accordance with the California Environmental Quality Act (“CEQA”) and the Surface Mining and Reclamation Act (“SMARA”). Upon completion of the CEQA and SMARA processes, the City may consider issuance of a Conditional Use Permit (“CUP”) for the proposed project and approval of each of the IMMC applications to the City.

In April 2005, the IMMC filed five applications and an expanded environmental assessment with technical appendices for the proposed mineral exploration and extraction project; the City accepted these applications as complete in May 2005. Subsequently, these applications were revised and resubmitted to the City in May 2007. IMMC prepared the 2011 Revised Project Description to avoid and abate potential environmental impacts identified in the 2008 DEIR and to incorporate project design improvements based on public input obtained through the CEQA process and IMMC’s public outreach program. To address these modifications, two of the five 2007 Revised Project Application documents have been updated. The new application document set is contained in “Idaho-Maryland Mine Project 2011 Revised Project Description, Formal Development Review and Mineral Project Applications and 2007 Revised General Plan Amendment, Prezone, and Annexation Applications, Volume RIA - Application Documents, May 2011”.

There are a total of five volumes that comprise the combined 2005, 2007, and 2011 Applications for the Idaho-Maryland Mine Project and are listed below with their current content. The project applications exist on the IMMC website as they were originally submitted:

- 2005 Volume I – 2005 Applications and Assessment and 2007 Executive Summary, Project Description, Formal Development and Mineral Project Applications
- 2005 Volume II – Plates (graphics that are no longer current)
- 2005 Volume III – 2005, 2007 and 2011 Technical Appendices (technical reports)
- 2007 Volume IIA – Current, New and Revised Plates
- 2011 Volume RIA – 2011 Revised Project Description, Formal Development Review and Mineral Project Applications and 2007 Revised General Plan, Prezone and Annexation Applications (supersedes 2005 Volume I and 2007 Volume IA as they were originally submitted)

The cited application document set contained in 2011 Volume RIA replaces 2007 Volume IA and 2005 Volume I previously submitted to the City with Volumes II (“2005 Volume II”) and IIA (“2007 Volume IIA”), Plates and 2005 Volume III. As that set, the May 2007 Revised Project Application Document Set (“2007 Revised Project Application”) was prepared in accordance with the City requirements. In addition, the Mineral Project Application (Section 3) has been prepared in accordance with SMARA.

The current graphics that support the cited 2011 and 2007 revised applications are contained in the 2007 Volume IIA. The project graphics that are no longer current are contained in the 2005 Volume II and have been labeled “superseded”. The current graphic plates contained in the 2007 Volume IIA are referenced in application text with a single number (e.g., 6) which indicates no changes were necessary since 2005. The plates may also have a prefix “R” for Revised and “N” for New. There are graphics referenced in the 2011 Volume RIA for which revisions have been made to previously unrevised graphic

plates and second revisions or those that were revised in 2007. To keep the nomenclature of such plates, figures, tables, appendices, and exhibit consistent, these items revised in 2011 will bear the prefix “R” and the suffix “Rev 2” so as not to confuse those revised for the first time in 2007 that are labeled with an “R”. New graphic plates, tables, figures, appendices and exhibits developed in 2011 are labeled with an “N” or “N” with an alphabetic suffix (e.g., N2 or N1D). The suffix (e.g., “a” or “A”) has been added if the item is in sequence with a plate, etc., with related subject matter. For instance, a new plate has been added to illustrate surface mine residue sampling on the Idaho-Maryland site and it has been labeled “N2D” to follow R2C-Rev2 which depicts Idaho-Maryland site surface features. If neither a prefix of “R”, “N” nor suffix “Rev2” appears on the figure, table, plate or exhibit, there have been no changes from the 2005 Project Application Document set. For instance, a plate identified as No. “7A” the numeric designation is that for a 2005 plate for which there have been no changes.

The technical reports that were used as a basis for completing the 2005 Project Application Document Set are contained in the 2005 Volume III. Certain technical analyses (e.g., tree survey, traffic and noise analyses) were required to be updated for the 2007 Revised Formal Development Review Application or the CEQA portion of the 2007 Revised Mineral Project Application and were contained in those documents as Appendices. Those technical appendices updated in 2007 have been relocated to the 2005 Volume III with the original analyses. New technical appendices developed to support the 2011 Revised Project Description have been assigned sequenced alphabetic nomenclature to those in the 2005 Volume III and are contained only in the 2011 Revised Project Description.

IDAHO-MARYLAND CONCEPTUAL CONSTRUCTION SHEDULE (YEARS 1 TO 8)



